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TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Apr 08	"Ask CAS" for self-help around the clock
NEWS	3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09	ZDB will be removed from STN
NEWS	5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS	6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03	New e-mail delivery for search results now available
NEWS	10	Jun 10	MEDLINE Reload
NEWS	11	Jun 10	PCTFULL has been reloaded
NEWS	12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS	13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30	NETFIRST to be removed from STN
NEWS	16	Aug 08	CANCERLIT reload
NEWS	17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08	NTIS has been reloaded and enhanced
NEWS	19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS	21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03	JAPIO has been reloaded and enhanced
NEWS	24	Sep 16	Experimental properties added to the REGISTRY file
NEWS	25	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	26	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	27	Oct 21	EVENTLINE has been reloaded
NEWS	28	Oct 24	BEILSTEIN adds new search fields
NEWS	29	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	30	Oct 25	MEDLINE SDI run of October 8, 2002
NEWS	31	Nov 18	DKILIT has been renamed APOLLIT
NEWS	32	Nov 25	More calculated properties added to REGISTRY
NEWS	33	Dec 02	TIBKAT will be removed from STN
NEWS	34	Dec 04	CSA files on STN
NEWS	35	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	36	Dec 17	TOXCENTER enhanced with additional content
NEWS	37	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS	38	Dec 30	ISMEC no longer available
NEWS	39	Jan 13	Indexing added to some pre-1967 records in CA/CAPLUS
NEWS EXPRESS			January 6 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
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NEWS WWW CAS World Wide Web Site (general information)

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 JAN 2003 HIGHEST RN 479190-61-9

DICTIONARY FILE UPDATES: 15 JAN 2003 HIGHEST RN 479190-61-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STN Note 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e aminoisophthalic

E1	8	AMINOISOPHTHALANILIDE/BI
E2	17	AMINOISOPHTHALATE/BI
E3	41 -->	AMINOISOPHTHALIC/BI
E4	3	AMINOISOPHTHALO/BI
E5	1	AMINOISOPHTHALONITRILE/BI
E6	2	AMINOISOPHTHALOYL/BI
E7	3	AMINOISOPR/BI
E8	3	AMINOISOPRENE/BI
E9	3	AMINOISOPROP/BI
E10	7	AMINOISOPROPAN/BI
E11	7	AMINOISOPROPANOL/BI
E12	3	AMINOISOPROPOXY/BI

=> s e1-e6

8 AMINOISOPHTHALANILIDE/BI

```

17 AMINOISOPHTHALATE/BI
41 AMINOISOPHTHALIC/BI
3 AMINOISOPHTHALO/BI
1 AMINOISOPHTHALONITRILE/BI
2 AMINOISOPHTHALOYL/BI
L1 66 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHT
    HALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR
    AMINOISOPHTHALOYL/BI)

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=> s el-ell

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8 AMINOISOPHTHALANILIDE/BI
17 AMINOISOPHTHALATE/BI
41 AMINOISOPHTHALIC/BI
3 AMINOISOPHTHALO/BI
1 AMINOISOPHTHALONITRILE/BI
2 AMINOISOPHTHALOYL/BI
3 AMINOISOPR/BI
3 AMINOISOPRENE/BI
3 AMINOISOPROP/BI
7 AMINOISOPROPAN/BI
7 AMINOISOPROPANOL/BI
L2 79 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHT
    HALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR
    AMINOISOPHTHALOYL/BI OR AMINOISOPR/BI OR AMINOISOPRENE/BI OR
    AMINOISOPROP/BI OR AMINOISOPROPAN/BI OR AMINOISOPROPANOL/BI)

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=> e tridecanediamine

```

E1 3 TRIDECANEDIAMIDINE/BI
E2 8 TRIDECANEDIAMIN/BI
E3 74 --> TRIDECANEDIAMINE/BI
E4 8 TRIDECANEDIAMINIUM/BI
E5 2 TRIDECANEDIANILIDE/BI
E6 11 TRIDECANEDICARBOXYL/BI
E7 2 TRIDECANEDICARBOXYLATE/BI
E8 9 TRIDECANEDICARBOXYLIC/BI
E9 27 TRIDECANEDIIMID/BI
E10 27 TRIDECANEDIIMIDAMIDE/BI
E11 11 TRIDECANEDINITRILE/BI
E12 69 TRIDECANEDIO/BI

```

=> s el-ell

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3 TRIDECANEDIAMIDINE/BI
8 TRIDECANEDIAMIN/BI
74 TRIDECANEDIAMINE/BI
8 TRIDECANEDIAMINIUM/BI
2 TRIDECANEDIANILIDE/BI
11 TRIDECANEDICARBOXYL/BI
2 TRIDECANEDICARBOXYLATE/BI
9 TRIDECANEDICARBOXYLIC/BI
27 TRIDECANEDIIMID/BI
27 TRIDECANEDIIMIDAMIDE/BI
11 TRIDECANEDINITRILE/BI
L3 133 (TRIDECANEDIAMIDINE/BI OR TRIDECANEDIAMIN/BI OR TRIDECANEDIAMINE
    /BI OR TRIDECANEDIAMINIUM/BI OR TRIDECANEDIANILIDE/BI OR TRIDECAN
    EDICARBOXYL/BI OR TRIDECANEDICARBOXYLATE/BI OR TRIDECANEDICARBO
    XYLIC/BI OR TRIDECANEDIIMID/BI OR TRIDECANEDIIMIDAMIDE/BI OR
    TRIDECANEDINITRILE/BI)

```

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

119.36

119.57

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 16 Jan 2003 VOL 138 ISS 3
FILE LAST UPDATED: 15 Jan 2003 (20030115/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d his

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003

E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 79 S E1-E11
E TRIDECANEDIAMINE
L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003

=> s 12

L4 2431 L2

=> s 13

L5 439 L3

=> s 14 and 15

L6 2 L4 AND L5

=> d 16 1-2

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
AN 2000:573551 CAPLUS
DN 133:164737
TI Elastomeric-modified phenolic rosin resins for pigment binders
IN Matzinger, Michael D.; Hutter, Frederick G.
PA Westvaco Corporation, USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 1028131	A2	20000816	EP 2000-400399	20000211

EP 1028131 A3 20001025
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 US 6153693 A 20001128 US 1999-248735 19990211
 PRAI US 1999-248735 A 19990211
 US 1998-61693 B2 19980416

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS
 AN 1983:81520 CAPLUS
 DN 98:81520
 TI Tricyclic imidyl derivatives
 IN Zweifel, Hans; Schilling, Walter; Storni, Angelo; Bellus, Daniel
 PA Ciba-Geigy Corp. , USA
 SO U.S., 13 pp. Cont.-in-part of U.S. 4,242,264.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4337200	A	19820629	US 1980-183905	19800904
	US 4242264	A	19801230	US 1979-9985	19790206
	CA 1138468	A2	19821228	CA 1982-393611	19820105
	US 4414394	A	19831108	US 1982-349419	19820216
	US 4417058	A	19831122	US 1982-349235	19820216
	US 4418199	A	19831129	US 1982-349120	19820216
	US 4418200	A	19831129	US 1982-349418	19820216
	US 4423231	A	19831227	US 1982-349119	19820216
	US 4424366	A	19840103	US 1982-349420	19820216
	US 4487942	A	19841211	US 1983-515413	19830720
	US 4486596	A	19841204	US 1983-526938	19830829
PRAI	CH 1978-1400		19780208		
	US 1979-9985		19790206		
	CA 1979-320890		19790206		
	US 1980-183905		19800904		
	US 1982-349419		19820216		
	US 1982-349420		19820216		

=> d 16 1-2 all

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:573551 CAPLUS
 DN 133:164737
 TI Elastomeric-modified phenolic rosin resins for pigment binders
 IN Matzinger, Michael D.; Hutter, Frederick G.
 PA Westvaco Corporation, USA
 SO Eur. Pat. Appl., 6 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08G008-10
 ICS C08L061-06; C09D011-10
 CC 37-3 (Plastics Manufacture and Processing)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1028131	A2	20000816	EP 2000-400399	20000211
	EP 1028131	A3	20001025		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6153693	A	20001128	US 1999-248735	19990211

PRAI US 1999-248735 A 19990211
US 1998-61693 B2 19980416

AB An improved method for producing pigment binder compns. comprises reacting in a condensation re- action: (a) 50-95% of a member selected from the group consisting of rosin esters, phenolic-modified rosin esters, reactive hydrocarbon resins, and combinations thereof; (b) 2-25% of a member selected from the group consisting of polyols contg. from 2 to 6 hydroxyl groups, amines contg. from 2 to 5 amine groups, alkanolamines contg. from 2 to 6 amine groups and/or hydroxyl groups, and combinations thereof, and (c) wherein the improvement comprises the addn. of 2-50% of the reactants of a member selected from the group consisting of butadiene homopolymers contg. at least one amine group, butadiene homopolymers contg. at least one carboxyl group, butadiene homopolymers contg. at least one hydroxyl group, butadiene homopolymers contg. at least one anhydride group, butadiene homopolymers contg. at least one epoxy group, and combinations thereof, to produce the pigment binder compn. In particular, the invention relates to elastomeric-modified pigment binder compns. which exhibit properties that make them useful in formulating vehicles for lithog. printing inks and other coating applications.

ST phenolic resin elastomer modified pigment binder

IT Binders

Pigments, nonbiological

(elastomeric-modified phenolic rosin resins for pigment binders)

IT Phenolic resins, uses

Polyoxyalkylenes, uses

Tall oil rosin

RL: TEM (Technical or engineered material use); USES (Uses)

(elastomeric-modified phenolic rosin resins for pigment binders)

IT Resin acids

RL: TEM (Technical or engineered material use); USES (Uses)

(esters; elastomeric-modified phenolic rosin resins for pigment binders)

IT Butadiene rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(hydroxy-terminated; elastomeric-modified phenolic rosin resins for pigment binders)

IT Inks

(lithog.; elastomeric-modified phenolic rosin resins for pigment binders)

IT Butadiene rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(maleated; elastomeric-modified phenolic rosin resins for pigment binders)

IT Hydrocarbons, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(resins; elastomeric-modified phenolic rosin resins for pigment binders)

IT 9003-17-2

RL: TEM (Technical or engineered material use); USES (Uses)

(butadiene rubber, hydroxy-terminated; elastomeric-modified phenolic rosin resins for pigment binders)

IT 9003-17-2

RL: TEM (Technical or engineered material use); USES (Uses)

(butadiene rubber, maleated; elastomeric-modified phenolic rosin resins for pigment binders)

IT 50-70-4, Sorbitol, uses 56-81-5, 1,2,3-Propanetriol, uses 57-55-6, 1,2-Propanediol, uses 69-65-8, Mannitol 77-85-0 77-86-1, Tris(hydroxymethyl)aminomethane 77-99-6, Trimethylolpropane 78-24-0, Tripentaerythritol 78-90-0, 1,2-Propylene diamine **78-96-6**, Isopropanolamine 80-05-7, uses 95-54-5, o-Phenylenediamine, uses 95-80-7 96-27-5, 1-Thioglycerol 101-77-9 102-71-6, uses 102-79-4, N-Butyldiethanolamine 104-10-9, 4-Aminophenethyl alcohol 105-08-8,

1,4-Cyclohexanedimethanol 105-59-9 105-83-9 106-50-3,
p-Phenylenediamine, uses 107-15-3, 1,2-Ethanediamine, uses 107-21-1,
1,2-Ethanediol, uses 107-88-0, 1,3-Butanediol 108-31-6, Maleic
anhydride, uses 108-45-2, 1,3-Benzenediamine, uses 109-76-2,
Trimethylenediamine 109-83-1, N-Methylethanolamine 110-60-1,
Tetramethylene diamine 110-63-4, 1,4-Butanediol, uses 110-85-0,
Piperazine, uses 110-97-4, Diisopropanolamine 111-29-5,
1,5-Pentanediol 111-40-0, Diethylene triamine 111-41-1 111-42-2,
uses 111-46-6, uses 112-24-3 112-27-6 112-57-2, Tetraethylene
pentamine 115-69-5, 2-Amino-2-methyl-1,3-propanediol 115-70-8,
2-Amino-2-ethyl-1,3-propanediol 115-77-5, uses 120-07-0 122-20-3,
Triisopropanolamine 124-09-4, 1,6-Hexanediamine, uses 126-30-7
126-58-9, Dipentaerythritol 139-87-7, N-Ethyldiethanolamine 141-43-5,
uses **143-23-7**, Bis(hexamethylene) triamine 156-87-6,
3-Amino-1-propanol 479-27-6, 1,8-Diaminonaphthalene 502-32-9, Leucinol
504-63-2, 1,3-Propanediol 584-03-2, 1,2-Butanediol 589-37-7,
1,3-Pentanediamine 616-30-8, 3-Amino-1,2-propane-diol 623-04-1,
4-Aminobenzyl alcohol 629-11-8, 1,6-Hexanediol 694-83-7,
1,2-Diaminocyclohexane 823-40-5, 2,6-Tolylenediamine 929-06-6,
2-(2-Aminoethoxy)ethanol 1761-71-3, Bis(4-aminocyclohexyl)methane
1877-77-6, 3-Aminobenzyl alcohol 2508-29-4, 5-Amino-1-pentanol
3114-70-3, 1,4-Diaminocyclohexane 3306-06-7, 2-Amino-1-phenyl-1,3-
propanediol 3385-21-5, 1,3-Diaminocyclohexane 4067-16-7,
Pentaerythritol 4097-89-6, Tris(aminoethyl)amine 4253-76-3,
N-Stearyl trimethylene diamine 4379-13-9, Isoleucinol 4426-48-6,
1,2-Butylene diamine 4985-85-7, N-(3-Aminopropyl) diethanolamine
5339-85-5, 2-Aminophenethyl alcohol 6850-38-0, 2-Aminocyclohexanol
6850-39-1, 3-Aminocyclohexanol 6850-65-3, 4-Amino-cyclohexanol
7173-62-8, N-Oleoyl trimethylene diamine 7568-93-6, 2-Amino-1-
phenylethanol 9003-17-2D, Butadiene homopolymer, functional group-contg.
15520-10-2 16369-05-4, 2-Amino-3-methyl-1-butanol 16369-14-5,
2-Amino-1-pentanol 16397-19-6, 2-Amino-1-hexanol 23235-61-2,
Ditrimethylolpropane 24800-44-0, Tripropylene glycol 25119-62-4,
Styrene-allyl alcohol copolymer 25154-52-3, Nonylphenol 25265-71-8,
Dipropylene glycol 25322-68-3 28631-79-0, Aminoethylpiperazine
30525-89-4, Paraformaldehyde 45007-61-2, Hexitol 48115-38-4,
.alpha.-(1-Aminoethyl) benzyl alcohol 68148-42-5, Glycerol
monothioglycolate
RL: TEM (Technical or engineered material use); USES (Uses)
(elastomeric-modified phenolic rosin resins for pigment binders)

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

AN 1983:81520 CAPLUS

DN 98:81520

TI Tricyclic imidyl derivatives

IN Zweifel, Hans; Schilling, Walter; Storni, Angelo; Bellus, Daniel

PA Ciba-Geigy Corp. , USA

SO U.S., 13 pp. Cont.-in-part of U.S. 4,242,264.

CODEN: USXXAM

DT Patent

LA English

IC C07D209-90; C07D209-94

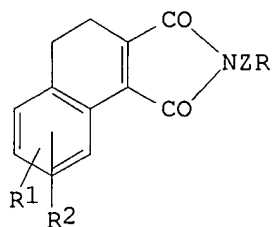
NCL 548451000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 4337200	A	19820629	US 1980-183905	19800904
	US 4242264	A	19801230	US 1979-9985	19790206
	CA 1138468	A2	19821228	CA 1982-393611	19820105
	US 4414394	A	19831108	US 1982-349419	19820216

US 4417058	A	19831122	US 1982-349235	19820216
US 4418199	A	19831129	US 1982-349120	19820216
US 4418200	A	19831129	US 1982-349418	19820216
US 4423231	A	19831227	US 1982-349119	19820216
US 4424366	A	19840103	US 1982-349420	19820216
US 4487942	A	19841211	US 1983-515413	19830720
US 4486596	A	19841204	US 1983-526938	19830829
PRAI CH 1978-1400		19780208		
US 1979-9985		19790206		
CA 1979-320890		19790206		
US 1980-183905		19800904		
US 1982-349419		19820216		
US 1982-349420		19820216		
GI				



I

AB A photocrosslinkable polymer suitable for prepn. of the printing plates for offset printing and as photoresists is prepd. with a tricyclic imidyl deriv. I (Z = C1-30 alkylene, C5-6 cycloalkylene, methylenebis(cyclohexylene), C6-10 arylene, C7-8 aralkylene, C7-8 alkylarylene or arylene substituted by C1-4 alkyl, C1-4 alkoxy or NO₂; R = NH₂, NH, C1-4 alkyl; R₁, R₂ = H, halogen, C1-4 alkyl or methoxy). Thus, an Al sheet support was coated with a 5% DMF soln. of a photocrosslinkable polymer obtained by copolymn. of maleic anhydride-Me vinyl ether copolymer and N-(2'-hydroxyethyl)-3,4-dihydronaphthalene-1,2-dicarboximide, dried, imagewise exposed by a 400 W Hg lamp at 40 cm distance for 6 min, and developed 3 s in THF and 30 s in 3% NaHCO₃.H₂O to give an image corresponding to 9 steps in a step wedge.

ST photopolymer tricyclic imidyl deriv photoresist; lithog plate photopolymer tricyclic imidyl

IT Lithographic plates
(offset, photopolymers for fabrication of, prepn. of, from tricyclic imidyl derivs.)

IT Resists
(photo-, for prepn. of photopolymers for photoresists and lithog. printing plates)

IT 72198-39-1 72198-42-6 72198-43-7 72198-46-0 72198-47-1
72198-48-2 72198-49-3 72198-50-6 72198-51-7 72198-52-8
72198-53-9 72198-54-0 72199-03-2 73005-41-1 73005-42-2
83591-34-8 83591-35-9
RL: USES (Uses)
(for prepn. of photopolymers for photoresists and lithog. plates)

IT 60-32-2 141-43-5, uses and miscellaneous 14438-56-3 26734-09-8
37845-14-0 **62351-76-2** 72198-40-4 72198-44-8 73005-43-3
74926-27-5
RL: USES (Uses)
(for prepn. of photopolymers for photoresists and lithog. printing plates)

IT 9011-16-9D, reaction products with (aminoethyl)dihydronaphthalenedicarboximide 72199-04-3 72199-05-4 72231-41-5 72231-42-6 72231-43-7
72231-44-8 83592-37-4

RL: USES (Uses)

(photoimaging compn. contg., prepn. of)

IT 72231-39-1P 72231-40-4P

RL: PREP (Preparation)

(prepn. of, for photoresist and lithog. plate fabrication)

=> e extracoporeal

E1	1	EXTRACOPIES/BI
E2	1	EXTRACOPORAL/BI
E3	18 -->	EXTRACOPOREAL/BI
E4	1	EXTRACOPORYL/BI
E5	3	EXTRACOPROREAL/BI
E6	5	EXTRACOPY/BI
E7	2	EXTRACOR/BI
E8	1	EXTRACORDAL/BI
E9	12	EXTRACORE/BI
E10	2	EXTRACORNEAL/BI
E11	4	EXTRACORONAL/BI
E12	9	EXTRACORONARY/BI

=> e extracoporeal

E1	1	EXTRACOPIES/BI
E2	1	EXTRACOPORAL/BI
E3	18 -->	EXTRACOPOREAL/BI
E4	1	EXTRACOPORYL/BI
E5	3	EXTRACOPROREAL/BI
E6	5	EXTRACOPY/BI
E7	2	EXTRACOR/BI
E8	1	EXTRACORDAL/BI
E9	12	EXTRACORE/BI
E10	2	EXTRACORNEAL/BI
E11	4	EXTRACORONAL/BI
E12	9	EXTRACORONARY/BI

=> e extracorporeal

E1	1	EXTRACORPORCALLY/BI
E2	2	EXTRACORPOREA/BI
E3	5268 -->	EXTRACORPOREAL/BI
E4	133	EXTRACORPOREALLY/BI
E5	1	EXTRACORPOREALS/BI
E6	1	EXTRACORPORED/BI
E7	1	EXTRACORPOREL/BI
E8	1	EXTRACORPOREOL/BI
E9	1	EXTRACORPREAL/BI
E10	25	EXTRACORPUSCULAR/BI
E11	26	EXTRACORTICAL/BI
E12	1	EXTRACOTYLEDONARY/BI

=> s e1-e11

	1	EXTRACORPORCALLY/BI
	2	EXTRACORPOREA/BI
5268		EXTRACORPOREAL/BI
133		EXTRACORPOREALLY/BI
	1	EXTRACORPOREALS/BI
	1	EXTRACORPORED/BI
	1	EXTRACORPOREL/BI
	1	EXTRACORPOREOL/BI
	1	EXTRACORPREAL/BI
	25	EXTRACORPUSCULAR/BI
	26	EXTRACORTICAL/BI
L7	5405	(EXTRACORPORCALLY/BI OR EXTRACORPOREA/BI OR EXTRACORPOREAL/BI

OR EXTRACORPOREALLY/BI OR EXTRACORPOREALS/BI OR EXTRACORPORED/BI
OR EXTRACORPOREL/BI OR EXTRACORPOREOL/BI OR EXTRACORPREAL/BI
OR EXTRACORPUSCULAR/BI OR EXTRACORTICAL/BI)

=> d his

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003

E AMINOISOPHTHALIC
L1 66 S E1-E6
L2 79 S E1-E11
E TRIDECANEDIAMINE
L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003

L4 2431 S L2
L5 439 S L3
L6 2 S L4 AND L5
E EXTRACOPOREAL
E EXTRACOPOREAL
E EXTRACOPOREAL
L7 5405 S E1-E11

=> s l4 and l7

L8 4 L4 AND L7

=> d l8 1-4

L8 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a biotin and a
radiometal chelation moiety for application to **extracorporeal**
affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA,
98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS
DN 136:42919
TI Biotin derivatives for an **extracorporeal** device
IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
PA Mitra Medical Technology AB, Swed.; University of Washington
SO PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:35036 CAPLUS
 DN 132:90366
 TI Trifunctional reagent for conjugation to a biomolecule for use in
 diagnosis and therapy
 IN Wilbur, D. Scott; Sandberg, Bengt E. B.
 PA Department of Radiation Oncology, University of Washington, USA; Mitra
 Medical Technology AB
 SO PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:				
	AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,				
	CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR,				
	HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,				
	LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,				
	SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM,				
	AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,				
	FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,				
	CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:				
	AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU,				
	CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM,				
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,				
	SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,				
	ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,				
	ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,				
	CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		
RE.CNT	11				
	THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD				
	ALL CITATIONS AVAILABLE IN THE RE FORMAT				

=> d his

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 79 S E1-E11

E TRIDECANEDIAMINE

L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003

L4 2431 S L2
L5 439 S L3
L6 2 S L4 AND L5
E EXTRACOPOREAL
E EXTRACOPOREAL
E EXTRACORPOREAL
L7 5405 S E1-E11
L8 4 S L4 AND L7

=> s 15 and 17

L9 0 L5 AND L7

=> d 130:267698 all

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS

AN 130:267698 CAPLUS

TI Synthesis of achiral linker reagents for direct labeling of
oligonucleotides on solid supports

AU Behrens, Carsten; Dahl, Otto

CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100,
Den.

SO Nucleosides & Nucleotides (1999), 18(2), 291-305

CODEN: NUNUD5; ISSN: 0732-8311

PB Marcel Dekker, Inc.

DT Journal

LA English

CC 33-10 (Carbohydrates)

Section cross-reference(s): 9

AB Full exptl. procedures for the synthesis of a series of new functional
linker reagents and solid supports are reported. The achiral linker
reagents and supports can be used for high yield incorporation of free
amino groups, fluorescein or biotin into DNA oligomers.

ST achiral amino linker oligonucleotide solidphase prepn fluorescent label;
hybridization oligonucleotide achiral amino linker

IT Solid phase synthesis
(of oligonucleotides contg. achiral amino linker reagents for direct
labeling)

IT Nucleic acid hybridization
(of oligonucleotides contg. achiral amino linker units)

IT Fluorescent substances
(prepn. of using achiral amino linker reagents for direct labeling of
oligonucleotides)

IT Oligonucleotides

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)

(synthesis of achiral amino linker reagents for direct labeling of
oligonucleotides on solid supports)

IT 99-31-0P 42122-73-6P 71176-54-0P 146335-23-1P 147190-36-1P

171082-06-7P 171082-07-8P 171082-08-9DP, solid-supported

171082-09-0P 188257-47-8P 188257-52-5P 188257-53-6DP,

solid-supported 188257-54-7P 188257-55-8P 188257-56-9DP,

solid-supported 221318-06-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(prepn. and reaction of in the synthesis of achiral amino linker
reagents for direct labeling of oligonucleotides on solid supports)

IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P

171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P

188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P

222054-01-5P 222054-02-6P 222054-03-7P 222054-04-8P 222054-05-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

IT 221889-90-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of using achiral amino linker reagents in one chain and effect on hybridization)

IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of using achiral amino linker reagents in one chain and effect on hybridization)

IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6,
 9-Fluorenylmethyl chloroformate 35013-72-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of in the synthesis of achiral amino linker reagents for direct labeling of oligonucleotides on solid supports)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bannwarth, W; Helv Chim Acta 1987, V70, P175 CAPLUS
- (2) Beaucage, S; Protocols for Oligonucleotide Conjugates Synthesis and Analytical Techniques 1994
- (3) Beaucage, S; Tetrahedron 1993, V49, P1925 CAPLUS
- (4) Behrens, C; Bioorg Med Chem Lett 1995, V5, P1785 CAPLUS
- (5) Chu, B; DNA 1985, V4, P327 CAPLUS
- (6) Nelson, P; Nucleic Acid Res 1992, V20, P6253 CAPLUS
- (7) Perich, J; Tetrahedron Lett 1987, V28, P101 CAPLUS
- (8) Smith, L; Nucleic Acid Res 1985, V13, P2399 CAPLUS
- (9) Tarrason, G; Antisense Research and Development 1995, V5, P193 CAPLUS
- (10) Wachter, L; Nucleic Acid Res 1986, V14, P7985 CAPLUS

=> d 126:207193 all

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS

AN 126:207193 CAPLUS

TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2

AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHE; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 1-6 (Pharmacology)
 Section cross-reference(s): 78

AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as potential antiproliferative agents in the treatment of AIDS-related lymphoma. The Cbl dimers were synthesized by crosslinking Cbl carboxylates, produced by acid hydrolysis of the b-, d-, and e-propionamide side chains of cyanocobalamin (CN-Cbl), through an isophthalate mol. Linking mols. were used between the Cbl carboxylates and the isophthalate moiety. The linkers were incorporated to provide a distance between the two Cbl mols. such that the dimeric Cbls might bind two mols. of transcobalamin II (TCII), the Cbl transport protein in plasma. Initially, the linking moiety used was 1,12-diaminododecane, but the resulting dimers had low aq. soly. To improve the soly. of the dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking moiety. This improved the water soly. of the dimers considerably, while retaining the distance between the Cbl mols. at 41-42 .ANG. (fully extended). To introduce addnl. substitution on Cbl dimers,

5-aminoisophthalic acid was used as the crosslinking reagent. P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers were prepd. as HPLC stds. for the radioiodinated product. Attempts to iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful. Although an explanation for this is not readily apparent, the failure to react may be due to the lipophilicity of the linker used and the steric environment of the two Cbl moieties. A biotinylated deriv. of 5-aminoisophthalate was also synthesized and used to prep. biotinylated-Cbl dimers. In a competitive rhTCII binding assay with [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking moiety had decreased binding avidities compared to those of Cbl monomers substituted at the same corrin ring carboxylate. However, Cbl dimers contg. the water-solubilizing trioxadiazine linker appeared to have avidities similar to those of the Cbl monomers.

ST cobalamin dimer prepn transcobalamin binding
 IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
 173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
 173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
 IT 12651-28-4, Transcobalamin II
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
 IT 68-19-9P, Cyanocobalamin
 RL: PUR (Purification or recovery); PREP (Preparation)
 (prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)
 IT 58-85-5P, Biotin 99-31-0P 26264-28-8P 38218-55-2P 38218-77-8P
 160927-56-0P 173341-26-9P 173341-31-6P 173341-49-6P 173341-51-0P
 173341-59-8P 188014-58-6P 188014-59-7P 188014-60-0P 188014-61-1P
 188014-62-2P 188014-63-3P 188014-64-4P 188014-65-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

=> d 126:3868 ALL

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS

AN 126:3868 CAPLUS
 TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin
 AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
 CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
 SO Bioconjugate Chemistry (1996), 7(6), 689-702
 CODEN: BCCHES; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English
 CC 8-9 (Radiation Biochemistry)

Section cross-reference(s): 14

- AB An evaluation of the use of a biotinylated monoclonal antibody Fab' fragment in tumor pretargeting was conducted. As a model system, tumor colocalization of avidin or recombinant streptavidin (r-streptavidin) and the biotinylated Fab' fragment (Fab'-S-biotin) of A6H, an antirenal cell carcinoma antibody, was evaluated in athymic mice bearing human renal cell carcinoma xenografts. A new water sol. sulfhydryl reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-trioxatridecanyl)biotinamide, was synthesized and used for biotinylation of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-biotin was conducted. Data from that distribution indicated that the Fab'-S-biotin localized well (i.e. 28% ID/g at 24 h) to human tumor xenografts in athymic mice. Subsequently, a biodistribution study involving pretargeting radioiodinated A6H Fab'-S-biotin to tumor xenografts, followed by administration of r-streptavidin at 4 or 20 h, was conducted. Specific colocalization of r-streptavidin to tumors contg. the A6H Fab'-S-biotin was evident from the data obtained. In a similar biodistribution study, specific colocalization of avidin to tumors pretargeted with A6H Fab'-S-biotin was also obsd. The avidin used in the study was radioiodinated with the N-hydroxysuccinimidyl ester of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35% ID/g) of avidin colocalized at the tumor. To further show that specific colocalization within the tumor xenografts had occurred with biotinylated A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into athymic mice bearing tumor xenografts to obtain their distributions without having biotinylated Fab' present. At 20 h postinjection, only small differences in the blood and tumor concns. of either protein were obsd., indicating that the specific tumor colocalization seen in the previous two biodistributions must have been due to the presence of Fab'-S-biotin. Calcns. were conducted to est. how much r-streptavidin (as a molar ratio) was colocalized. From the data obtained it was estd. that 36-61% of the tumor-localized Fab'-S-biotin mols. were bound with r-streptavidin and 4-23% bound with avidin, under the conditions studied.
- ST tumor pretargeting biotinylated monoclonal antibody
- IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
- IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
- IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
- IT 173341-32-7P 183896-00-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
- IT 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 55750-48-6,
N-Methoxycarbonylmaleimide 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)
- IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(Uses)

(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 58-85-5, Biotin

RL: RCT (Reactant); RACT (Reactant or reagent)

(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 183896-02-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

=> D 127:12587 ALL

ANSWER 1 CAPLUS COPYRIGHT 2003 ACS

AN 127:12587 CAPLUS

TI Application of laser to the pretreatment of glass carbon electrode

AU Liu, Bin; Jinrui, Xu; Huang, Mialiang; Lin, Jianming

CS Dept. Applied Chemistry, Huaqiao Univ., Quanzhou, 362011, Peop. Rep. China

SO Huaqiao Daxue Xuebao, Ziran Kexueban (1996), 17(4), 362-364

CODEN: HDZIEF; ISSN: 1000-5013

PB Huaqiao Daxue

DT Journal

LA Chinese

CC 79-2 (Inorganic Analytical Chemistry)

Section cross-reference(s): 72, 73

AB The C electrodes for electroanal. were treated with laser. The effect of pulse width, pulse energy, and irradiation time of laser on the preconcn. of Pb²⁺ in aq. (NH₄)₂SO₄ and the anodic stripping currents was studied. The stability, sensitivity, and reproducibility of C electrode were improved when the electrode was treated with a laser beam of 514.5 nm and a pulse width 25 ms for 2 min.

ST carbon electrode laser treatment electrochem analysis

IT Electrodes

Lasers

Voltammetry

(laser pretreatment of glass carbon electrode)

IT 7439-92-1, Lead, analysis

RL: ANT (Analyte); ANST (Analytical study)

(laser pretreatment of glass carbon electrode)

IT 7440-44-0, Carbon, uses

RL: DEV (Device component use); USES (Uses)

(laser pretreatment of glass carbon electrode)

=> D HIS

(FILE 'HOME' ENTERED AT 15:36:37 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 15:36:53 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 79 S E1-E11

E TRIDECANEDIAMINE

L3 133 S E1-E11

FILE 'CAPLUS' ENTERED AT 15:38:57 ON 16 JAN 2003

L4 2431 S L2

L5 439 S L3

L6 2 S L4 AND L5

E EXTRACOPREAL

E EXTRACOPREAL
E EXTRACORPoreal
L7 5405 S E1-E11
L8 4 S L4 AND L7
L9 0 S L5 AND L7

=>

---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	51.73	171.30
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-3.91	-3.91

STN INTERNATIONAL LOGOFF AT 15:54:06 ON 16 JAN 2003

AN 130:267698 CAPLUS
TI Synthesis of achiral linker reagents for direct labeling of
oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100,
Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
CC 33-10 (Carbohydrates)
Section cross-reference(s): 9
AB Full exptl. procedures for the synthesis of a series of new functional
linker reagents and solid supports are reported. The achiral linker
reagents and supports can be used for high yield incorporation of free
amino groups, fluorescein or biotin into DNA oligomers.
ST achiral amino linker oligonucleotide solidphase prepn fluorescent label;
hybridization oligonucleotide achiral amino linker
IT Solid phase synthesis
(of oligonucleotides contg. achiral amino linker reagents for direct
labeling)
IT Nucleic acid hybridization
(of oligonucleotides contg. achiral amino linker units)
IT Fluorescent substances
(prepn. of using achiral amino linker reagents for direct labeling of
oligonucleotides)
IT Oligonucleotides
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
(synthesis of achiral amino linker reagents for direct labeling of
oligonucleotides on solid supports)
IT 99-31-0P 42122-73-6P 71176-54-0P 146335-23-1P 147190-36-1P
171082-06-7P 171082-07-8P 171082-08-9DP, solid-supported
171082-09-0P 188257-47-8P 188257-52-5P 188257-53-6DP,
solid-supported 188257-54-7P 188257-55-8P 188257-56-9DP,
solid-supported 221318-06-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and reaction of in the synthesis of achiral amino linker
reagents for direct labeling of oligonucleotides on solid supports)
IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P
171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P
188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P
222054-01-5P 222054-02-6P 222054-03-7P 222054-04-8P 222054-05-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents for direct labeling of
oligonucleotides on solid supports)
IT 221889-90-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect
on hybridization)
IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect
on hybridization)
IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6,
9-Fluorenylmethyl chloroformate 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of achiral amino linker reagents for
direct labeling of oligonucleotides on solid supports)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bannwarth, W; Helv Chim Acta 1987, V70, P175 CAPLUS
- (2) Beaucage, S; Protocols for Oligonucleotide Conjugates Synthesis and Analytical Techniques 1994
- (3) Beaucage, S; Tetrahedron 1993, V49, P1925 CAPLUS
- (4) Behrens, C; Bioorg Med Chem Lett 1995, V5, P1785 CAPLUS
- (5) Chu, B; DNA 1985, V4, P327 CAPLUS
- (6) Nelson, P; Nucleic Acid Res 1992, V20, P6253 CAPLUS
- (7) Perich, J; Tetrahedron Lett 1987, V28, P101 CAPLUS
- (8) Smith, L; Nucleic Acid Res 1985, V13, P2399 CAPLUS
- (9) Tarrason, G; Antisense Research and Development 1995, V5, P193 CAPLUS
- (10) Wachter, L; Nucleic Acid Res 1986, V14, P7985 CAPLUS

=>

AN 126:3868 CAPLUS

TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and Avidin

AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 14

AB An evaluation of the use of a biotinylated monoclonal antibody Fab' fragment in tumor pretargeting was conducted. As a model system, tumor colocalization of avidin or recombinant streptavidin (r-streptavidin) and the biotinylated Fab' fragment (Fab'-S-biotin) of A6H, an antirenal cell carcinoma antibody, was evaluated in athymic mice bearing human renal cell carcinoma xenografts. A new water sol. sulfhydryl reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-trioxatridecanyl)biotinamide, was synthesized and used for biotinylation of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-biotin was conducted. Data from that distribution indicated that the Fab'-S-biotin localized well (i.e. 28% ID/g at 24 h) to human tumor xenografts in athymic mice. Subsequently, a biodistribution study involving pretargeting radioiodinated A6H Fab'-S-biotin to tumor xenografts, followed by administration of r-streptavidin at 4 or 20 h, was conducted. Specific colocalization of r-streptavidin to tumors contg. the A6H Fab'-S-biotin was evident from the data obtained. In a similar biodistribution study, specific colocalization of avidin to tumors pretargeted with A6H Fab'-S-biotin was also obsd. The avidin used in the study was radioiodinated with the N-hydroxysuccinimidyl ester of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35% ID/g) of avidin colocalized at the tumor. To further show that specific colocalization within the tumor xenografts had occurred with biotinylated A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into athymic mice bearing tumor xenografts to obtain their distributions without having biotinylated Fab' present. At 20 h postinjection, only small differences in the blood and tumor concns. of either protein were obsd., indicating that the specific tumor colocalization seen in the previous two biodistributions must have been due to the presence of Fab'-S-biotin. Calcns. were conducted to est. how much r-streptavidin (as a molar ratio) was colocalized. From the data obtained it was estd. that 36-61% of the tumor-localized Fab'-S-biotin mols. were bound with r-streptavidin and 4-23% bound with avidin, under the conditions studied.

ST tumor pretargeting biotinylated monoclonal antibody

IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and

avidin)
 IT 173341-32-7P 183896-00-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (intermediate; renal cell carcinoma pretargeting using biotinylated
 Fab' monoclonal antibody with recombinant streptavidin and avidin)
 IT 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 55750-48-6,
 N-Methoxycarbonylmaleimide 142685-25-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant; renal cell carcinoma pretargeting using biotinylated Fab'
 monoclonal antibody with recombinant streptavidin and avidin)
 IT 9013-20-1, Streptavidin
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (renal cell carcinoma pretargeting using biotinylated Fab' monoclonal
 antibody with recombinant streptavidin and avidin)
 IT 58-85-5, Biotin
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (renal cell carcinoma pretargeting using biotinylated Fab' monoclonal
 antibody with recombinant streptavidin and avidin)
 IT 183896-02-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (renal cell carcinoma pretargeting using biotinylated Fab' monoclonal
 antibody with recombinant streptavidin and avidin)

=>

AN 126:207193 CAPLUS
 TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin
 Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
 AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon;
 Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHE; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English
 CC 1-6 (Pharmacology)
 Section cross-reference(s): 78
 AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as
 potential antiproliferative agents in the treatment of AIDS-related
 lymphoma. The Cbl dimers were synthesized by crosslinking Cbl
 carboxylates, produced by acid hydrolysis of the b-, d-, and
 e-propionamide side chains of cyanocobalamin (CN-Cbl), through an
 isophthalate mol. Linking mols. were used between the Cbl carboxylates
 and the isophthalate moiety. The linkers were incorporated to provide a
 distance between the two Cbl mols. such that the dimeric Cbls might bind
 two mols. of transcobalamin II (TCII), the Cbl transport protein in
 plasma. Initially, the linking moiety used was 1,12-diaminododecane, but
 the resulting dimers had low aq. soly. To improve the soly. of the
 dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking
 moiety. This improved the water soly. of the dimers considerably, while
 retaining the distance between the Cbl mols. at 41-42 .ANG. (fully
 extended). To introduce addnl. substitution on Cbl dimers,
 5-aminoisophthalic acid was used as the crosslinking reagent.
 P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of
 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The
 stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used
 in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers
 were prepd. as HPLC stds. for the radioiodinated product. Attempts to
 iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful.
 Although an explanation for this is not readily apparent, the failure to
 react may be due to the lipophilicity of the linker used and the steric
 environment of the two Cbl moieties. A biotinylated deriv. of
 5-aminoisophthalate was also synthesized and used to prep.
 biotinylated-Cbl dimers. In a competitive rhTCII binding assay with
 [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking
 moiety had decreased binding avidities compared to those of Cbl monomers
 substituted at the same corrin ring carboxylate. However, Cbl dimers
 contg. the water-solubilizing trioxadamine linker appeared to have
 avidities similar to those of the Cbl monomers.
 ST cobalamin dimer prepn transcobalamin binding
 IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
 173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
 173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); SPN (Synthetic preparation); BIOL (Biological
 study); PREP (Preparation)
 (prepn. of cobalamin dimers and binding to human recombinant
 transcobalamin II)
 IT 12651-28-4, Transcobalamin II
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (prepn. of cobalamin dimers and binding to human recombinant
 transcobalamin II)
 IT 68-19-9P, Cyanocobalamin
 RL: PUR (Purification or recovery); PREP (Preparation)

(prepn. of cobalamin dimers and binding to human recombinant
transcobalamin II)

IT	58-85-5P, Biotin	99-31-0P	26264-28-8P	38218-55-2P	38218-77-8P
	160927-56-0P	173341-26-9P	173341-31-6P	173341-49-6P	173341-51-0P
	173341-59-8P	188014-58-6P	188014-59-7P	188014-60-0P	188014-61-1P
	188014-62-2P	188014-63-3P	188014-64-4P	188014-65-5P	

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(prepn. of cobalamin dimers and binding to human recombinant
transcobalamin II)

=>

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NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
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saved answer sets no longer valid
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now available on STN
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NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 27 Oct 21 EVENTLINE has been reloaded
NEWS 28 Oct 24 BEILSTEIN adds new search fields
NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002
NEWS 31 Nov 18 DKILIT has been renamed APOLLIT
NEWS 32 Nov 25 More calculated properties added to REGISTRY
NEWS 33 Dec 02 TIBKAT will be removed from STN
NEWS 34 Dec 04 CSA files on STN
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NEWS 36 Dec 17 TOXCENTER enhanced with additional content
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NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS

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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> e aminoisophthalic

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E2	17	AMINOISOPHTHALATE/BI
E3	41 -->	AMINOISOPHTHALIC/BI
E4	3	AMINOISOPHTHALO/BI
E5	1	AMINOISOPHTHALONITRILE/BI
E6	2	AMINOISOPHTHALOYL/BI
E7	3	AMINOISOPR/BI
E8	3	AMINOISOPRENE/BI
E9	3	AMINOISOPROP/BI
E10	7	AMINOISOPROPAN/BI
E11	7	AMINOISOPROPANOL/BI
E12	3	AMINOISOPROPOXY/BI

=> s e1-e6

8 AMINOISOPHTHALANILIDE/BI

17 AMINOISOPHTHALATE/BI
 41 AMINOISOPHTHALIC/BI
 3 AMINOISOPHTHALO/BI
 1 AMINOISOPHTHALONITRILE/BI
 2 AMINOISOPHTHALOYL/BI
 L1 66 (AMINOISOPHTHALANILIDE/BI OR AMINOISOPHTHALATE/BI OR AMINOISOPHTHALIC/BI OR AMINOISOPHTHALO/BI OR AMINOISOPHTHALONITRILE/BI OR AMINOISOPHTHALOYL/BI)

=> d 11 66

L1 ANSWER 66 OF 66 REGISTRY COPYRIGHT 2003 ACS
 RN 99-27-4 REGISTRY
 CN 1,3-Benzenedicarboxylic acid, 5-amino-, dimethyl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Isophthalic acid, 5-amino-, dimethyl ester (7CI, 8CI)

OTHER NAMES:

CN 3,5-Dicarbomethoxyaniline

CN 5-Aminobenzene-1,3-dicarboxylic acid dimethyl ester

CN **5-Aminoisophthalic acid dimethyl ester**

CN Dimethyl 5-aminobenzene-1,3-dicarboxylate

CN **Dimethyl 5-aminoisophthalate**

CN Methyl 5-amino-3-(methoxycarbonyl)benzoate

FS 3D CONCORD

DR 50891-97-9

MF C10 H11 N O4

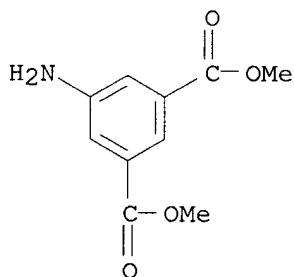
CI COM

LC STN Files: BEILSTEIN*, BIOBUSINESS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, HODOC*, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, SPECINFO, SYNTHLINE, TOXCENTER, USPATFULL

(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

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93 REFERENCES IN FILE CAPLUS (1962 TO DATE)

3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

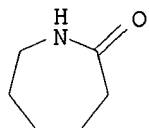
=> d 11 1

L1 ANSWER 1 OF 66 REGISTRY COPYRIGHT 2003 ACS

RN 306305-22-6 REGISTRY
 CN 1,3-Benzenedicarboxylic acid, 5-amino-, polymer with 3-aminobenzoic acid
 and hexahydro-2H-azepin-2-one (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN 2H-Azepin-2-one, hexahydro-, polymer with 5-amino-1,3-benzenedicarboxylic
 acid and 3-aminobenzoic acid (9CI)
 CN Benzoic acid, 3-amino-, polymer with 5-amino-1,3-benzenedicarboxylic acid
 and hexahydro-2H-azepin-2-one (9CI)
 OTHER NAMES:
 CN **m-Aminobenzoic acid-caprolactam-5-aminoisophthalic acid copolymer**
 MF (C8 H7 N O4 . C7 H7 N O2 . C6 H11 N O)x
 CI PMS
 PCT Polyamide, Polyamide formed
 SR CA
 LC STN Files: CA, CAPLUS

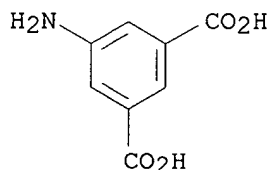
CM 1

CRN 105-60-2
 CMF C6 H11 N O



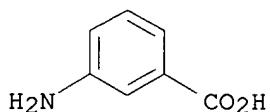
CM 2

CRN 99-31-0
 CMF C8 H7 N O4



CM 3

CRN 99-05-8
 CMF C7 H7 N O2



1 REFERENCES IN FILE CA (1962 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

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 L3 597 L1

=> e biotin

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E2	1	BIOTIMES/BI
E3	22854 -->	BIOTIN/BI
E4	1	BIOTIN10/BI
E5	1	BIOTIN14C/BI
E6	1	BIOTINA/BI
E7	1	BIOTINAAPFCMK/BI
E8	2	BIOTINALYTED/BI
E9	63	BIOTINAMIDE/BI
E10	1	BIOTINAMIDE27/BI
E11	1	BIOTINAMIDECAPROATE/BI
E12	3	BIOTINAMIDES/BI

=> s e3
 L4 22854 BIOTIN/BI

=> s l3 and l4

L5 15 L3 AND L4

=> d 15

L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 15 1-15

L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:523951 CAPLUS
DN 137:228855
TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:319261 CAPLUS
DN 137:59601
TI A Streptavidin-**Biotin** Binding System That Minimizes Blocking by Endogenous **Biotin**
AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan; Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
CS Departments of Bioengineering, Medicine, and Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(3), 588-598
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2001:923565 CAPLUS

DN 136:42919
 TI **Biotin** derivatives for an extracorporeal device
 IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
 PA Mitra Medical Technology AB, Swed.; University of Washington
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
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	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
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	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:35037 CAPLUS
 DN 132:90367
 TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy
 IN Wilbur, D. Scott; Sandberg, Bengt E. B.
 PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB
 SO PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,			

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
 CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2336739	AA	20000113	CA 1999-2336739	19990707
AU 9950767	A1	20000124	AU 1999-50767	19990707
EP 1095274	A1	20010502	EP 1999-935251	19990707

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

JP 2002519440	T2	20020702	JP 2000-558395	19990707
US 2001023288	A1	20010920	US 2000-750280	20001229
NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707
 WO 1999-SE1241 W 19990707

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in
 diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Department of Radiation Oncology, University of Washington, USA; Mitra
 Medical Technology AB

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, VZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, VZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1999:668186 CAPLUS
 DN 132:46430
 TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
 AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
 CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.
 SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
 CODEN: BCCHE5; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 132:46430
 RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1999:140535 CAPLUS
 DN 130:267698
 TI Synthesis of achiral linker reagents for direct labeling of oligonucleotides on solid supports
 AU Behrens, Carsten; Dahl, Otto
 CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
 SO Nucleosides & Nucleotides (1999), 18(2), 291-305
 CODEN: NUNUD5; ISSN: 0732-8311
 PB Marcel Dekker, Inc.
 DT Journal
 LA English
 RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1999:109400 CAPLUS
 DN 130:177546
 TI Methods of receptor modulation and therapeutic and diagnostic uses therefor
 IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
 PA Receptagen Corporation, USA; University of Washington
 SO U.S., 47 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5869465	A	19990209	US 1995-406194	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123

PRAI US 1994-224831 B2 19940408
US 1995-406191 A 19950316
US 1995-406192 A 19950316
US 1995-406194 A 19950316
WO 1995-US4404 W 19950407
US 1995-545151 A3 19951019

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776603 CAPLUS

DN 130:38642

TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott

PA Receptagen Corporation, USA; University of Washington

SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776598 CAPLUS

DN 130:38641

TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.

PA Receptagen Corporation, USA; University of Washington

SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316

US 5869465 A 19990209 US 1995-406194 19950316
 WO 9714711 A1 19970424 WO 1996-US16672 19961018
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
 DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG
 AU 9677182 A1 19970507 AU 1996-77182 19961018
 EP 1015475 A1 20000705 EP 1996-940247 19961018
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI
 US 6083926 A 20000704 US 1998-200422 19981123
 PRAI US 1994-224831 B2 19940408
 US 1995-406191 A2 19950316
 US 1995-406192 A2 19950316
 US 1995-406194 A2 19950316
 WO 1995-US4404 A2 19950407
 US 1995-545151 A 19951019
 US 1995-545496 A 19951019
 WO 1996-US16672 W 19961018
 OS MARPAT 130:38641

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1998:236288 CAPLUS
 DN 128:295003
 TI Preparation of biotinylated cobalamins as antiinflammatory agents and
 transcobalamin II receptors
 IN Wilbur, D. Scott; Pathare, Pradip M.; Morgan, A. Charles, Jr.
 PA University of Washington, USA; Receptagen Corp.
 SO U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5739287	A	19980414	US 1995-406192	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

L5 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:377886 CAPLUS

DN 126:343813
 TI Preparation of vitamin B12 receptor modulating agents
 IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
 PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
 SO PCT Int. Appl., 97 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1996-US16672	W	19961018		
OS	MARPAT 126:343813				

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:251007 CAPLUS

DN 126:238622

TI A new achiral linker reagent for the incorporation of multiple amino groups into oligonucleotides

IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto

PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Dahl, Otto

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		
OS	MARPAT 126:238622				

L5 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:155067 CAPLUS
 DN 126:207193
 TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin
 Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
 AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon;
 Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHES; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1991:225167 CAPLUS
 DN 114:225167
 TI Method of assaying substances and immunoassay element employing
 .beta.-D-galactosidase
 IN Onishi, Akira; Kawakatsu, Satoshi; Ito, Tsukasa; Takahashi, Takenori;
 Fukaya, Michie
 PA Konica Co., Japan
 SO Eur. Pat. Appl., 61 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 328106	A2	19890816	EP 1989-102245	19890209
	EP 328106	A3	19901219		
	R: DE, GB				
	JP 01308966	A2	19891213	JP 1989-31530	19890209
	JP 01308967	A2	19891213	JP 1989-31531	19890209
PRAI	JP 1988-29632		19880209		
	JP 1988-29633		19880209		
OS	MARPAT 114:225167				

=> d 15 3-15 all

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:923565 CAPLUS
 DN 136:42919
 TI **Biotin** derivatives for an extracorporeal device
 IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
 PA Mitra Medical Technology AB, Swed.; University of Washington
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K
 CC 63-7 (Pharmaceuticals)
 Section cross-reference(s): 26
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES,			

FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
 KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
 MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ,
 TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,
 KZ, MD, RU, TJ

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002159994 A1 20021031 US 2001-881213 20010615

AU 2001074761 A5 20011224 AU 2001-74761 20010618

PRAI SE 2000-2287 A 20000616

US 2000-216625P P 20000707

WO 2001-SE1374 W 20010618

AB A method for the conditioning of an extracorporeal device is described, as well as a method for extracorporeal extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) a soln. contg. a reagent comprising **biotin** moieties, such as natural **biotin** or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (iii) an extracorporeal device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.

ST **biotin** deriv prepn reagent extracorporeal toxin extn; body fluid

toxin extn extracorporeal **biotin** reagent

IT Histocompatibility antigens

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(HLA, antibodies against; prepn. of **biotin** derivs. for

conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Imaging

(NMR; prepn. of **biotin** derivs. for conditioning of

extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Intercalation

(agents; prepn. of **biotin** derivs. for conditioning of

extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies

RL: REM (Removal or disposal); PROC (Process)

(anti-blood group; prepn. of **biotin** derivs. for conditioning

of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Blood-group substances

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(antibodies against; prepn. of **biotin** derivs. for

conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins

RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**biotin** derivs.-binding coatings; prepn. of **biotin**

derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunity

(cells involved in, removal of; prepn. of **biotin** derivs. for

conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins

RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological

study); USES (Uses)
 (conjugates, with agarose; prepn. of **biotin** derivs. for
 conditioning of extracorporeal device and extn. of toxic material from
 mammalian body fluids)

IT Animal cell
 (diseased, removal of; prepn. of **biotin** derivs. for
 conditioning of extracorporeal device and extn. of toxic material from
 mammalian body fluids)

IT Toxins
 RL: REM (Removal or disposal); PROC (Process)
 (endotoxins; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

IT Toxins
 RL: REM (Removal or disposal); PROC (Process)
 (enterotoxins; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

IT Circulation
 Extraction
 (extracorporeal; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

IT Chelating agents
 (for radionuclides; prepn. of **biotin** derivs. for conditioning
 of extracorporeal device and extn. of toxic material from mammalian
 body fluids)

IT Immunoglobulins
 RL: REM (Removal or disposal); PROC (Process)
 (fragments; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

IT Antibodies
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (monoclonal, conjugates, with dibiotin compd.; prepn. of **biotin**
 derivs. for conditioning of extracorporeal device and extn. of toxic
 material from mammalian body fluids)

IT Antibodies
 RL: REM (Removal or disposal); PROC (Process)
 (monoclonal; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

IT Amino group
 Blood
 Body fluid
 Carboxyl group
 Chemotherapy
 Cytotoxic agents
 Dyes
 Extraction columns
 Hydroxyl group
 (prepn. of **biotin** derivs. for conditioning of extracorporeal
 device and extn. of toxic material from mammalian body fluids)

IT Chelates
 Cytokines
 Metals, processes
 Oligodeoxyribonucleotides
 Peptides, processes
 Radionuclides, processes
 Toxins
 Tumor necrosis factors

RL: REM (Removal or disposal); PROC (Process)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Diagnosis
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Positron-emission tomography
 Scintigraphy
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Transplant and Transplantation
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids prior to transplantation)

IT Bacteria (Eubacteria)
 Virus
 (toxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Disease, animal
 (treatment; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (tribiotinylated; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
 (uptake, monitoring of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (xenoantibodies, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (**biotin** derivs.-binding coatings; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, **Biotin 99-31-0**, 5-Aminoisophthalic acid
 4246-51-9, 4,7,10,Trioxa-1,13-tridecanediamine 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P
 380607-56-7P 380607-60-3P 380607-61-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal

device and extn. of toxic material from mammalian body fluids)
 IT 380607-52-3P 380607-54-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal
 device and extn. of toxic material from mammalian body fluids)
 IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates
 with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P
 380607-58-9P 380607-59-0P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal
 device and extn. of toxic material from mammalian body fluids)
 IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0,
 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-**biotin**
 1784-22-1, Homobiotin 3376-83-8, **Biotin** sulfoxide
 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7,
 Diaminobiotin 40720-05-6, **Biotin** sulfone
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal
 device and extn. of toxic material from mammalian body fluids)
 IT 58-85-5D, **Biotin**, derivs.
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (radiolabeled; prepn. of **biotin** derivs. for conditioning of
 extracorporeal device and extn. of toxic material from mammalian body
 fluids)

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:35037 CAPLUS
 DN 132:90367
 TI Trifunctional reagent for conjugation to a biomolecule for use in
 diagnosis and therapy
 IN Wilbur, D. Scott; Sandberg, Bengt E. B.
 PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
 Technology AB
 SO PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G01N033-543
 ICS A61K039-00; A61K047-48; A61K051-00; A61K049-00
 CC 9-15 (Biochemical Methods)
 Section cross-reference(s): 1, 8, 15, 63
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,				

SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
 CM, GA, GN, ML, MR, NE, SN, TD, TG

CA 2336739	AA	20000113	CA 1999-2336739	19990707
AU 9950767	A1	20000124	AU 1999-50767	19990707
EP 1095274	A1	20010502	EP 1999-935251	19990707

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

JP 2002519440	T2	20020702	JP 2000-558395	19990707
US 2001023288	A1	20010920	US 2000-750280	20001229
NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707
 WO 1999-SE1241 W 19990707

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humoral mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. **biotin** or a **biotin** deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; **biotin**
 trifunctional reagent biomol conjugate diagnosis therapy; toxin
 trifunctional reagent biomol conjugate therapy; prodrug converting enzyme
 trifunctional reagent conjugate; immunomodulator trifunctional reagent
 conjugate; radiotherapy trifunctional reagent conjugate; imaging agent
 trifunctional reagent conjugate

IT Imaging agents
 (NMR contrast, trifunctional reagent contg., as effector agent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Imaging agents
 (acoustic imaging contrast agents, trifunctional reagent contg., as
 effector agent; trifunctional reagent for conjugation to a biomol. for
 use in diagnosis and therapy)

IT Proteins, specific or class
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (affinity ligand-binding, for removal of nontargeted biomol. conjugate
 from blood circulation; trifunctional reagent for conjugation to a
 biomol. for use in diagnosis and therapy)

IT Ligands
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical
 study); BIOL (Biological study); PROC (Process); USES (Uses)
 (affinity, trifunctional reagent contg.; trifunctional reagent for
 conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
 (ammonio group, linkers contg.; trifunctional reagent for conjugation
 to a biomol. for use in diagnosis and therapy)

IT Chromophores
 Fluorescent substances
 (as effector agent in trifunctional reagent; trifunctional reagent for
 conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
(blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease
(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
RL: PRP (Properties)
(esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
(extracorporeal, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
(extracorporeal, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Affinity chromatographic stationary phases
(for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging
(gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Vinyl compounds, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Aryl halides
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
Receptors
RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized, extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Heart, disease
(infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ethers, properties

Sulfonates

Thioethers

RL: PRP (Properties)

(linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation

(nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiosensitizers, biological

(pharmaceutical, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Materials

(photoactive chems., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU

(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);

ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT

(Reactant or reagent); USES (Uses)

(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems

(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease

(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy

(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal

(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid

(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue

Cell

(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU

(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);

ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT

(Reactant or reagent); USES (Uses)

(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants

Immunosuppressants

(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Hormones, animal, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Photodynamic therapy
Photoimaging
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging agents
(x-ray, contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(biotin-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);

ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, **Biotin**, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety **99-31-0D**, 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D, 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, **Biotin** sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 40720-05-6D, **Biotin** sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5 254447-31-9

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
- (2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
- (3) Boehringer Mannheim GmbH; EP 0618192 A1 1994 CAPLUS
- (4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
- (5) Eigo, O; 1997, 20, CAPLUS
- (6) Eigo, O; Cancer Res 1997, V88(2), P205
- (7) Gaetjens, E; US 5134071 A 1992 CAPLUS
- (8) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
- (9) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
- (10) Jacobson, K; US 5310916 A 1994 CAPLUS
- (11) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
- (12) Pharmacia & Upjohn Ab; WO 9904820 A2 1999 CAPLUS
- (13) Tutt, A; The Journal of Immunology 1991, V147(1), P60 CAPLUS

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-543
 ICS C07K019-00; A61K039-395; A61K047-48; A61K051-00; A61K049-00
 CC 9-15 (Biochemical Methods)
 Section cross-reference(s): 1, 8, 15, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707	
	W:			AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:			GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
	AU 9883663	A1	20000124	AU 1998-83663	19980707	
	CA 2336739	AA	20000113	CA 1999-2336739	19990707	
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707	
	W:			AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW:			GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	AU 9950767	A1	20000124	AU 1999-50767	19990707	
	EP 1095274	A1	20010502	EP 1999-935251	19990707	
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO		
	JP 2002519440	T2	20020702	JP 2000-558395	19990707	
	NO 2001000021	A	20010307	NO 2001-21	20010103	
PRAI	WO 1998-SE1345	A	19980707			
	WO 1999-SE1241	W	19990707			
AB	A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humours mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. biotin or a biotin deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.					
ST	trifunctional reagent biomol conjugation diagnosis therapy; biotin trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate					
IT	Proteins, specific or class RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a					

biomol. for use in diagnosis and therapy)

IT Ligands
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
 (ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
 (blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease
 (embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
 RL: PRP (Properties)
 (esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
 (extracorporeal, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
 (extracorporeal, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Affinity chromatographic stationary phases
 (for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging
 (gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Vinyl compounds, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Aryl halides
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
 Receptors

RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immobilized, extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Heart, disease
 (infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ethers, properties
 Sulfonates
 Thioethers
 RL: PRP (Properties)
 (linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
 (nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems
 (prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease
 (stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy
 (targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal
 (treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
 (trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue
 Cell
 (trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants
 Immunosuppressants

(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents
RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents
(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis
(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**biotin**-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, **Biotin**, conjugates with crosslinking agent binding to

effect agent and to biomol. reactive moiety **99-31-0D**,
 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent
 and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates
 with affinity ligand and effector agent and biomol. reactive moiety
 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to
 effect agent and to biomol. reactive moiety 535-87-5D,
 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector
 agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene,
 conjugates with affinity ligand and effector agent and biomol. reactive
 moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding
 to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin,
 conjugates with crosslinking agent binding to effect agent and to biomol.
 reactive moiety 3376-83-8D, **Biotin** sulfoxide, conjugates with
 crosslinking agent binding to effect agent and to biomol. reactive moiety
 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to
 effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin,
 conjugates with crosslinking agent binding to effect agent and to biomol.
 reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking
 agent binding to effect agent and to biomol. reactive moiety
 40720-05-6D, **Biotin** sulfone, conjugates with crosslinking agent
 binding to effect agent and to biomol. reactive moiety 254441-23-1
 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6
 254447-29-5

RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (trifunctional reagent for conjugation to a biomol. for use in
 diagnosis and therapy)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
- (2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
- (3) Boehringer Mannheim GmbH; EP 0618192 A1 1994 CAPLUS
- (4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
- (5) Gaetjens, E; US 5134071 A 1992 CAPLUS
- (6) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
- (7) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
- (8) Jacobson, K; US 5310916 A 1994 CAPLUS
- (9) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
- (10) Otusji, E; 1997, 20, CAPLUS
- (11) Otusji, E; Cancer Res 1997, V88(2), P205 CAPLUS

L5 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:668186 CAPLUS

DN 132:46430

TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing
 Covalently Attached Ligands

AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger,
 Ronald

CS Lash Miller Laboratories Department of Chemistry, University of Toronto,
 Toronto, ON, M5S 3H6, Can.

SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
 CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 6-3 (General Biochemistry)

Section cross-reference(s): 9

OS CASREACT 132:46430

AB Hb can be cross-linked and converted to a bioconjugate in one step by a
 mol. necklace, a reagent that contains two reacting sites and a pendant

ligand. The compd. to be conjugated is activated as an electrophile. The activated material is then combined with a reagent (3-aminoisophthalic acid) that contains a nucleophilic (amino) site and two latent (carboxyl) sites. The latent sites of the product are activated as 3,5-dibromosalicylates to produce the cross-linker. Illustrative examples of crosslinking are presented with pendant **biotin** [bis(3,5-dibromosalicyl) N-biotinyl-5-aminoisophthalate] and pendant N-trifluoroacetyl-L-isoleucylglycine [bis(3,5-dibromosalicyl) N-(N-trifluoroacetyl-L-isoleucylglycyl)-5-aminoisophthalate]. The resulting modified Hbs contain two principal types of cross-link: (.beta.-Lys-82-.beta.'-Lys-82) and (.alpha.-Lys-99-.alpha.'-Lys-99). The functional properties of the modified Hb contg. **biotin** in a (.beta.-Lys-82-.beta.'-Lys-82) cross-link are (pH 7.4, 55 .mu.M heme, 25 .degree.C, 0.1 M chloride, and 50 mM Bis-Tris) P50 = 4.9 Torr, n50 = 3.0, values which are approx. the same as for native Hb. The results of affinity chromatog. of the biotinylated cross-linked Hb using a column of immobilized avidin indicate that the pendant **biotin** is much less accessible than free **biotin**. We suggest that the results are consistent with the pendant species being strongly attracted into the Hb environment.

ST Hb crosslinking bioconjugate mol necklace pendant ligand
 IT Hemoglobins
 RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
 (crosslinked, bioconjugates; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT Crosslinking
 (prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT Hemoglobins
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT 7782-44-7, Oxygen, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (binding by Hb bioconjugates; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT 56-87-1, L-Lysine, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (crosslinking; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT 25952-53-8, 1-(3-Dimethylaminopropyl)3-ethylcarbodiimide hydrochloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (linker; prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT 58-85-5 **99-27-4**, Dimethyl 5-aminoisophthalate **99-31-0**, 5-Aminoisophthalic acid 407-25-0, Trifluoroacetic acid anhydride 7719-09-7, Thionyl chloride 16257-05-9 88797-22-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)
 IT 91853-90-6P 252861-79-3P 252861-80-6P 252861-81-7P 252861-82-8P 252861-83-9P 252861-84-0P 252861-85-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of mol. necklaces contg. pendant ligands for crosslinking of Hb to make bioconjugates)

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Adamczyk, M; Bioconjugate Chem 1997, V8, P400 CAPLUS

- (2) Arnone, A; J Mol Biol 1977, V115, P627 CAPLUS
- (3) Bayer, E; Methods Enzymol 1990, V184, P138 CAPLUS
- (4) Bayer, E; Methods Enzymol 1990, V184, P174 CAPLUS
- (5) Bayer, E; Methods Enzymol 1990, V184, P80 CAPLUS
- (6) Dickerson, R; Hemoglobin:Structure, Function, Evolution, and Pathology 1983
- (7) Green, N; Methods Enzymol 1990, V184, P51 CAPLUS
- (8) Guidotti, G; J Biol Chem 1967, V242, P3685 CAPLUS
- (9) Imai, K; Methods Enzymol 1981, V76, P438 CAPLUS
- (10) Imai, K; Methods Enzymol 1994, V232, P559 CAPLUS
- (11) Jones, R; Biochemistry 1993, V32, P215 CAPLUS
- (12) Jones, R; Methods Enzymol 1994, V231, P322 CAPLUS
- (13) Keipert, P; Biomater Artif Cells Immobilization Biotechnol 1992, V20, P737 CAPLUS
- (14) Kluger, R; Artif Cells Blood Substitutes Immobil Biotechnol 1994, V22, P415 CAPLUS
- (15) Kluger, R; Bioconjugate Chem 1997, V8, P921 CAPLUS
- (16) Kluger, R; Can J Chem 1999, V77, P271 CAPLUS
- (17) Kluger, R; J Am Chem Soc 1992, V114, P9275 CAPLUS
- (18) Kluger, R; J Am Chem Soc 1996, V118, P8782 CAPLUS
- (19) Kluger, R; J Org Chem 1994, V59, P733 CAPLUS
- (20) Kluger, R; Protein Function a Practical Approach 1997, P185 CAPLUS
- (21) Laemmli, U; Nature (London) 1970, V227, P680 CAPLUS
- (22) Schumacher, M; Nature (London) 1995, V375, P84 CAPLUS
- (23) Schumacher, M; Proc Natl Acad Sci U S A 1997, V94, P7841 CAPLUS
- (24) Shelton, J; J Liq Chromatogr 1984, V7, P1969 CAPLUS
- (25) Shibayama, N; Biochemistry 1991, V30, P8158 CAPLUS
- (26) Snyder, S; Proc Natl Acad Sci U S A 1987, V84, P7280 CAPLUS
- (27) Trimble, S; Bioconjugate Chem 1997, V8, P416 CAPLUS
- (28) Walder, J; Biochemistry 1979, V18, P4265 CAPLUS
- (29) Winslow, R; Hemoglobin-Based Red Cell Substitutes 1995

L5 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:140535 CAPLUS

DN 130:267698

TI Synthesis of achiral linker reagents for direct labeling of oligonucleotides on solid supports

AU Behrens, Carsten; Dahl, Otto

CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.

SO Nucleosides & Nucleotides (1999), 18(2), 291-305

CODEN: NUNUD5; ISSN: 0732-8311

PB Marcel Dekker, Inc.

DT Journal

LA English

CC 33-10 (Carbohydrates)

Section cross-reference(s): 9

AB Full exptl. procedures for the synthesis of a series of new functional linker reagents and solid supports are reported. The achiral linker reagents and supports can be used for high yield incorporation of free amino groups, fluorescein or **biotin** into DNA oligomers.

ST achiral amino linker oligonucleotide solidphase prepn fluorescent label; hybridization oligonucleotide achiral amino linker

IT Solid phase synthesis
(of oligonucleotides contg. achiral amino linker reagents for direct labeling)

IT Nucleic acid hybridization
(of oligonucleotides contg. achiral amino linker units)

IT Fluorescent substances
(prepn. of using achiral amino linker reagents for direct labeling of oligonucleotides)

IT Oligonucleotides

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)
(synthesis of achiral amino linker reagents for direct labeling of
oligonucleotides on solid supports)

IT 99-31-0P 42122-73-6P 71176-54-0P 146335-23-1P
147190-36-1P 171082-06-7P 171082-07-8P 171082-08-9DP,
solid-supported 171082-09-0P 188257-47-8P 188257-52-5P
188257-53-6DP, solid-supported 188257-54-7P 188257-55-8P
188257-56-9DP, solid-supported 221318-06-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(prepn. and reaction of in the synthesis of achiral amino linker
reagents for direct labeling of oligonucleotides on solid supports)

IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P
171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P
188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P
222054-01-5P 222054-02-6P 222054-03-7P 222054-04-8P 222054-05-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents for direct labeling of
oligonucleotides on solid supports)

IT 221889-90-3P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect
on hybridization)

IT 221889-92-5P 221889-94-7P 221889-96-9P 221889-98-1P 221890-00-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of using achiral amino linker reagents in one chain and effect
on hybridization)

IT 618-88-2 3282-30-2, Pivaloyl chloride 3326-32-7 28920-43-6,
9-Fluorenylmethyl chloroformate 35013-72-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of in the synthesis of achiral amino linker reagents for
direct labeling of oligonucleotides on solid supports)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Bannwarth, W; Helv Chim Acta 1987, V70, P175 CAPLUS
- (2) Beaucage, S; Protocols for Oligonucleotide Conjugates Synthesis and
Analytical Techniques 1994
- (3) Beaucage, S; Tetrahedron 1993, V49, P1925 CAPLUS
- (4) Behrens, C; Bioorg Med Chem Lett 1995, V5, P1785 CAPLUS
- (5) Chu, B; DNA 1985, V4, P327 CAPLUS
- (6) Nelson, P; Nucleic Acid Res 1992, V20, P6253 CAPLUS
- (7) Perich, J; Tetrahedron Lett 1987, V28, P101 CAPLUS
- (8) Smith, L; Nucleic Acid Res 1985, V13, P2399 CAPLUS
- (9) Tarrason, G; Antisense Research and Development 1995, V5, P193 CAPLUS
- (10) Wachter, L; Nucleic Acid Res 1986, V14, P7985 CAPLUS

L5 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:109400 CAPLUS

DN 130:177546

TI Methods of receptor modulation and therapeutic and diagnostic uses
therefor

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott

PA Receptagen Corporation, USA; University of Washington

SO U.S., 47 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-68

ICS C12P019-42

NCL 514052000

CC 1-12 (Pharmacology)

Section cross-reference(s): 9, 26

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5869465	A	19990209	US 1995-406194	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		
AB	Receptor-modulating agents capable of modulating cell surface receptors by affecting the cell-surface receptor trafficking pathway are utilized for the treatment and diagnosis of a variety of disorders in warm-blooded animals, including neoplastic disorders. The receptor-modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety. Synthesis of several receptor-modulating agents using different functional classes of rerouting moieties is described. More specifically, a series of examples are presented which employ vitamin B12 as a targeting moiety in a receptor-modulating agent.				
ST	receptor modulating agent diagnostic therapeutic; neoplasm diagnosis therapy receptor modulating agent; vitamin B12 receptor modulating agent prepn				
IT	Protein receptors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (transcobalamin II; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)				
IT	Receptors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (vitamin B12 and others; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)				
IT	55729-45-8P	72040-64-3P	173341-32-7P	173341-33-8P	173341-34-9P
	173341-49-6P	173341-59-8P	189887-10-3P	189887-11-4P	189887-12-5P
	RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (prepn. and reaction; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)				
IT	58-85-5, Biotin 60-32-2, 6-Aminocaproic acid 99-31-0 , 5-Aminoisophthalic acid 99-63-8, Isophthaloyl dichloride 108-30-5, Succinic anhydride, reactions 260-94-6D, Acridine, derivs, conjugates with cyanocobalamin carboxylic acid diaminododecanesuccinyl deriv. 769-39-1, 2,3,5,6-Tetrafluorophenol 813-19-4, Bis(tributyltin) 1711-02-0, 4-Iodobenzoyl chloride 2783-17-7, 1,12-Diaminododecane 15231-41-1 27497-52-5, Tetrafluorophenol 35013-72-0 110079-43-1 173341-35-0 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction; receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)				
IT	68-19-9D, Vitamin B12, dimers				

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 68-19-9, Cyanocobalamin

RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 26264-28-8P 38218-55-2P 38218-77-8P 160927-56-0P 173341-26-9P 173341-31-6P

RL: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 72333-39-2P 173341-27-0P 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7DP, conjugate with acridine deriv.

173341-41-8P 173341-42-9P 173341-46-3P 173341-47-4P 173341-48-5P

RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 173341-51-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

IT 173341-52-1P 173341-53-2P 173341-54-3P 189887-10-3DP, conjugate with acridine deriv. 189887-11-4DP, conjugate with acridine deriv. 189887-12-5DP, conjugate with acridine deriv.

RL: SPN (Synthetic preparation); PREP (Preparation)

(receptor modulation methods, therapeutic and diagnostic uses, and receptor-modulating agent prepn.)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; WO 8702251 1987 CAPLUS

(2) Anon; EP 0361817 A2 1990 CAPLUS

(3) Anon; EP 0378203 A2 1990 CAPLUS

(4) Anon; WO 93/23557 1993 CAPLUS

(5) Anon; EP 0599325 A1 1994 CAPLUS

(6) Anon; WO 94/27613 1994 CAPLUS

(7) Habberfield; US 5574018 1996 CAPLUS

(8) Kraautler, B; Angewandte Chemie International Edition English 1995, V34(1), P84

(9) Law; US 5538901 1996 CAPLUS

(10) Mclean; Analogs Of Cobalamin in Habit The Growth Of Leukemia In Vitro P1

(11) Palumbo; US 5294536 1994 CAPLUS

(12) Pathare; Bioconjugate Chem 1997, V8(2), P161 CAPLUS

(13) Pignatello, J; J Chem Soc Dalton Trans 1985, P1381 CAPLUS

(14) Pourfarzaneh; US 5310656 1994 CAPLUS

(15) Rodwell; US 5196510 1993 CAPLUS

(16) Russell; US 5428023 1995 CAPLUS

(17) Russell; US 5548064 1996 CAPLUS

(18) Russell; US 5589463 1996 CAPLUS

(19) Takahashi, K; Nature 1980, V288(18), P713

L5 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776603 CAPLUS

DN 130:38642
 TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
 modulating agents
 IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
 PA Receptagen Corporation, USA; University of Washington
 SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C12P019-42
 ICS A61K031-68
 NCL 536026400
 CC 33-7 (Carbohydrates)
 Section cross-reference(s): 1, 34, 63
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		
AB	Vitamin B12 antiinflammatory receptor modulating agents capable of modulating cell surface receptors by affecting the cell surface receptor trafficking pathway are disclosed. The vitamin B12 receptor modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety linked by a water-solubilizing linker. Synthesis of a vitamin B12/ biotin conjugate and fusion protein receptor modulating agent is reported.				
ST	water soluble linker vitamin B12 prepn; receptor modulating agent vitamin B12; vitamin B12 biotin peptide prepn antiinflammatory				
IT	Anti-inflammatory agents (Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)				
IT	Peptides, preparation RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)				
IT	Receptors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (Prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)				
IT	12651-28-4, Transcobalamin II RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)				

(Prepn. of water sol. vitamin B12 as antiinflammatory receptor
modulating agents)

IT 56-12-2, GABA, reactions 57-92-1, reactions 58-85-5 60-32-2
68-19-9, Cyanocobalamin 99-31-0 99-63-8, 1,3-Benzenedicarbonyl
dichloride 769-39-1, 2,3,5,6-Tetrafluorophenol 1711-02-0 2783-17-7,
1,12-Dodecanediamine 35013-72-0 80366-85-4 86689-14-7 110079-43-1
173341-32-7 216692-05-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(Prepn. of water sol. vitamin B12 as antiinflammatory receptor
modulating agents)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P
160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P 173341-33-8P
173341-34-9P 173341-35-0P 173341-36-1P 173341-37-2P 173341-38-3P
173341-39-4P 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P
173341-44-1P 173341-45-2P 173341-46-3P 173341-47-4P 173341-48-5P
173341-49-6P 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P
173341-59-8P 189887-07-8P 189887-08-9P 189887-10-3P 189887-11-4P
189887-12-5P 216757-91-4P 216757-92-5P 216757-93-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(Prepn. of water sol. vitamin B12 as antiinflammatory receptor
modulating agents)

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Akin, C; Cancer Letters 1993, V69, P51 CAPLUS
- (2) Anderson, R; Science 1992, V255, P410 CAPLUS
- (3) Anon; EP 0069450 A1 1983 CAPLUS
- (4) Anon; EP 0361817 A2 1990 CAPLUS
- (5) Anon; EP 0378203 A2 1990 CAPLUS
- (6) Anon; EP 0425680 A1 1991 CAPLUS
- (7) Anon; WO 93/23557 1993 CAPLUS
- (8) Anon; EP 0599325 A1 1994 CAPLUS
- (9) Anon; WO 94/27613 1994 CAPLUS
- (10) Carpentier, J; Journal of Cellular Physiology 1989, V138, P519 CAPLUS
- (11) Ciechanover, A; Cell 1994, V79, P13 CAPLUS
- (12) Gratzer, W; Seminars in Hematology 1993, V30(3), P232 MEDLINE
- (13) Jabbar, M; Journal of Virology 1990, V64(12), P6297 MEDLINE
- (14) Joly, M; Science 1994, V263, P684 CAPLUS
- (15) Krautler, B; Angewandte Chemie International Edition English 1995, V34(1),
P84
- (16) Kreiner, T; Cell Regulation 1990, V1, P415 CAPLUS
- (17) Malorni, W; Journal of Cell Science 1993, V106, P309 CAPLUS
- (18) Mayor, S; Science 1994, V264, P1948 CAPLUS
- (19) Mayor, S; The Journal of Cell Biology 1993, V121(6), P1257 CAPLUS
- (20) Parton, R; The Journal of Cell Biology 1994, V127(5), P1199 CAPLUS
- (21) Pourfarzneh; US 5310656 1994 CAPLUS
- (22) Robertson, B; Archives of Biochemistry and Biophysics 1992, V292(1), P190
CAPLUS
- (23) Rodwell; US 5196510 1993 CAPLUS
- (24) Ross, J; Cancer 1994, V73(9), P2432 CAPLUS
- (25) Russel-Jones; US 5428023 1995 CAPLUS
- (26) Schnitzer, J; The Journal of Cell Biology 1994, V127(5), P1217 CAPLUS
- (27) Selhub; US 4167556 1979 CAPLUS
- (28) Sigal, N; Annual Review Immunology 1992, V10, P519 CAPLUS
- (29) Takahashi, K; Nature 1980, V288(18), P713
- (30) Thiele, D; Transplantation 1992, V53(6), P1334 MEDLINE

L5 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776598 CAPLUS

DN 130:38641

TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington
SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
CODEN: USXXAM

DT Patent

LA English

IC ICM A01N043-04

ICS A61K031-70

NCL 514052000

CC 33-7 (Carbohydrates)

Section cross-reference(s): 1, 34, 63

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1995-US4404	A2	19950407		
	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	WO 1996-US16672	W	19961018		
OS	MARPAT 130:38641				
AB	Vitamin B12 antiinflammatory receptor modulating agents capable of modulating cell surface receptors by affecting the cell surface receptor trafficking pathway are disclosed. The vitamin B12 receptor modulating agents are comprised of a covalently bound rerouting moiety and targeting moiety linked by a water-solubilizing linker. Synthesis of a vitamin B12/ biotin conjugate and fusion protein receptor modulating agent is reported.				
ST	water soluble linker vitamin B12 prepn; receptor modulating agent vitamin B12; vitamin B12 biotin peptide prepn antiinflammatory				
IT	Anti-inflammatory agents (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)				
IT	Peptides, preparation RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)				
IT	Receptors RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process) (prepn. of water sol. vitamin B12 as antiinflammatory receptor				

modulating agents)

IT 188014-58-6P 188014-60-0P 189887-13-6P 189887-14-7P 189887-15-8P
 189887-16-9P 189887-17-0P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 12651-28-4, Transcobalamin II
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 56-12-2, reactions 57-92-1, Streptomycin, reactions 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid 68-19-9, Cyanocobalamin **99-31-0**, 5-Aminoisophthalic acid 99-63-8, 1,3-Benzenedicarbonyl dichloride 769-39-1, 2,3,5,6-Tetrafluorophenol 1711-02-0, 4-Iodobenzoyl chloride 2783-17-7, 1,12-Diaminododecane 35013-72-0 80366-85-4 86689-14-7 110079-43-1 173341-32-7 216692-05-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P
 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P 173341-33-8P
 173341-34-9P 173341-35-0P 173341-36-1P 173341-37-2P 173341-38-3P
 173341-39-4P 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P
 173341-44-1P 173341-45-2P 173341-46-3P 173341-47-4P 173341-48-5P
 173341-49-6P 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P
 173341-59-8P 189887-07-8P 189887-08-9P 189887-10-3P 189887-11-4P
 189887-12-5P 216757-91-4P 216757-92-5P 216757-93-6P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of water sol. vitamin B12 as antiinflammatory receptor modulating agents)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Akin, C; Cancer Letters 1993, V69, P51 CAPLUS
- (2) Anderson, R; Science 1992, V255(24), P410
- (3) Anon; EP 0069450 A1 1983 CAPLUS
- (4) Anon; EP 0361817 A2 1990 CAPLUS
- (5) Anon; EP 0378203 A2 1990 CAPLUS
- (6) Anon; EP 0425680 A1 1991 CAPLUS
- (7) Anon; WO 93/23557 1993 CAPLUS
- (8) Anon; EP 0599325 A1 1994 CAPLUS
- (9) Anon; WO 94/27613 1994 CAPLUS
- (10) Ashworth, R; Proceedings of the National Academy of Science USA 1995, V92, P512 CAPLUS
- (11) Carpentier, J; Journal of Cellular Physiology 1989, V138, P519 CAPLUS
- (12) Cavallaro, U; Seminars in Cancer Biology 1995, V6, P269 CAPLUS
- (13) Ciechanover, A; Cell 1994, V79, P13 CAPLUS
- (14) Gratzer, W; Seminars in Hematology 1993, V30(3), P232 MEDLINE
- (15) Habberfield; US 5574018 1996 CAPLUS
- (16) Jabbar, M; Journal of Virology 1990, V64(12), P6297 MEDLINE
- (17) Joly, M; Science 1994, V263, P684 CAPLUS
- (18) Krautler, B; Angewandte Chemie International Edition English 1995, V34(1)
- (19) Kreiner, T; Cell Regulation 1990, V1, P415 CAPLUS
- (20) Law; US 5538901 1996 CAPLUS
- (21) Malorni, W; Journal of Cell Science 1993, V106, P309 CAPLUS
- (22) Mayor, S; Science 1994, V264, P1948 CAPLUS
- (23) McLean; Analogs of Cobalamin Inhibit Growth of Leukemia Cells in vitro
- (24) Palumbo; US 5294536 1994 CAPLUS
- (25) Pathare; Bioconjugate Chem 1997, V8, P161 CAPLUS

(26) Pathare, P; Abstracts of Papers of the American Chemical Society 1995
 (27) Pignatello, J; J Chem Soc Dalton Trans 1985, P1381 CAPLUS
 (28) Pourfarzaneh; US 5310656 1994 CAPLUS
 (29) Rodwell; US 5196510 1993 CAPLUS
 (30) Russell-Jones; US 5428023 1995 CAPLUS
 (31) Russell-Jones; US 5548064 1996 CAPLUS
 (32) Russell-Jones; US 5589463 1996 CAPLUS
 (33) Selhub; US 4167556 1979 CAPLUS
 (34) Takahashi, K; Nature 1980, V288(18), P713

L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1998:236288 CAPLUS
 DN 128:295003

TI Preparation of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors

IN Wilbur, D. Scott; Pathare, Pradip M.; Morgan, A. Charles, Jr.

PA University of Washington, USA; Receptagen Corp.

SO U.S., 58 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K031-70

ICS A61K038-16; C07H023-00; C07K001-113

NCL 530367000

CC 33-7 (Carbohydrates)

Section cross-reference(s): 1, 63

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5739287	A	19980414	US 1995-406192	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

AB A biotinylated cobalamin, formed from a vitamin B12 mol. coupled to a **biotin** mol., is disclosed. In a preferred embodiment, the vitamin B12 mol. is cyanocobalamin. The **biotin** mol. can also be coupled to a rerouting moiety, optionally through a **biotin** binding protein such as avidin or streptavidin. The biotinylated cobalamin binds to a cell surface receptor, is invaginated, and once internalized affects the receptor trafficking pathway.

ST biotinylated cyanocobalamin prepn antiinflammatory transcobalamin receptor

IT Anti-inflammatory agents
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT Receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 160927-56-0P 173341-26-9P 173341-27-0P 173341-31-6P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 50479-22-6
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 173341-36-1P 173341-37-2P 173341-38-3P 173341-39-4P 173341-40-7P
 173341-41-8P 173341-42-9P 173341-46-3P 173341-47-4P 173341-48-5P
 189887-08-9P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 12651-28-4, Transcobalamin II
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 58-85-5, **Biotin** 60-32-2, 6-Aminocaproic acid 68-19-9,
 Cyanocobalamin **99-31-0**, 5-Aminoisophthalic acid 769-39-1,
 2,3,5,6-Tetrafluorophenol 2783-17-7, 1,12-Diaminododecane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 26264-28-8P 38218-55-2P 38218-77-8P 55729-45-8P 72040-64-3P
 173341-33-8P 173341-34-9P 173341-35-0P 173341-49-6P 173341-59-8P
 189887-10-3P 189887-11-4P 189887-12-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

IT 173341-32-7P 173341-43-0P 173341-44-1P 173341-45-2P 173341-51-0P
 173341-52-1P 173341-53-2P 173341-54-3P 189887-07-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of biotinylated cobalamins as antiinflammatory agents and transcobalamin II receptors)

L5 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:377886 CAPLUS

DN 126:343813

TI Preparation of vitamin B12 receptor modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.

PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.

SO PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H023-00

CC 33-9 (Carbohydrates)

FAN.CNT 6

PATENT NO.

KIND DATE

APPLICATION NO. DATE

PI WO 9714711 A1 19970424 WO 1996-US16672 19961018
 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
 DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
 RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG
 US 5840712 A 19981124 US 1995-545151 19951019
 AU 9677182 A1 19970507 AU 1996-77182 19961018
 EP 1015475 A1 20000705 EP 1996-940247 19961018
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI
 PRAI US 1995-545151 A 19951019
 US 1995-545496 A 19951019
 US 1994-224831 B2 19940408
 US 1995-406191 A2 19950316
 US 1995-406192 A2 19950316
 US 1995-406194 A2 19950316
 WO 1996-US16672 W 19961018
 OS MARPAT 126:343813
 AB Vitamin B12 receptor modulating agents capable of modulating cell surface
 receptors by affecting the cell surface receptor trafficking pathway are
 disclosed. The vitamin B12 receptor modulating agents are comprised of a
 covalently bound rerouting moiety and targeting moiety linked by a
 water-solubilizing linker.
 ST receptor modulating agent vitamin B12 prepn; nucleoside vitamin B12 prepn
 antiinflammatory; vitamin B12 prepn receptor antiinflammatory
 IT Anti-inflammatory agents
 (prepn. and antiinflammatory activity of vitamin B12 receptor
 modulating agents)
 IT Receptors
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (vitamin B12 modulating agents; prepn. and antiinflammatory activity of
 vitamin B12 receptor modulating agents)
 IT Nucleosides, preparation
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (vitamin B12; prepn. and antiinflammatory activity of vitamin B12
 receptor modulating agents)
 IT 189887-08-9P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
 (Reactant or reagent); USES (Uses)
 (prepn. and antiinflammatory activity of vitamin B12 receptor
 modulating agents)
 IT 173341-40-7P 173341-41-8P 173341-42-9P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and antiinflammatory activity of vitamin B12 receptor
 modulating agents)
 IT 57-92-1, Streptomycin, reactions 58-85-5, **Biotin** 60-32-2,
 6-Aminocaproic acid 68-19-9, Vitamin B12 86-38-4 **99-31-0**,
 5-Aminoisophthalic acid 99-63-8, 1,3-Benzenedicarbonyl dichloride
 769-39-1, 2,3,5,6-TETRAFLUOROPHENOL 1711-02-0, 4-Iodobenzoyl chloride
 4246-51-9 38218-77-8 50479-22-6 173341-33-8 173341-35-0
 RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. and antiinflammatory activity of vitamin B12 receptor
modulating agents)

IT 68-19-9DP, Cyanocobalamin, b, d, or e-diaminododecanamide acridine or
biotinylated isophthaloyl derivs. 2783-17-7P, 1,12-Diaminododecane
26264-28-8P 38218-55-2P 72040-64-3P 160927-56-0P 173341-26-9P
173341-27-0P 173341-31-6P 173341-32-7P 173341-34-9P 173341-36-1P
173341-37-2P 173341-38-3P 173341-39-4P 173341-46-3P 173341-47-4P
173341-48-5P 173341-49-6P 173341-59-8P 189887-07-8P 189887-10-3P
189887-11-4P 189887-12-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and antiinflammatory activity of vitamin B12 receptor
modulating agents)

IT 173341-51-0P 173341-52-1P 173341-53-2P 173341-54-3P 188014-58-6P
188014-60-0P 189887-13-6P 189887-14-7P 189887-15-8P 189887-16-9P
189887-17-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and antiinflammatory activity of vitamin B12 receptor
modulating agents)

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:251007 CAPLUS

DN 126:238622

TI A new achiral linker reagent for the incorporation of multiple amino
groups into oligonucleotides

IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
Dahl, Otto

PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen,
John; Dahl, Otto

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA English

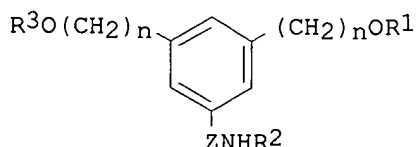
IC ICM C07H021-00

ICS C07F009-24; C07F009-141; C12Q001-68; G01N033-543

CC 33-10 (Carbohydrates)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		
OS	MARPAT 126:238622				
GI					



I

AB Functionalized achiral linker reagents, e.g. I [n = 1-3; Z = bond, C1-C10

chain optionally interrupted by 1-5 heteroatoms; R1 = H-phosphonate, phosphoramidite; R2 = amino protecting groups, e.g., PhCH2O2C, Me3CO2C, 9-fluorenylmethoxycarbonyl, allyloxycarbonyl, F3CCO, phthaloyl and reporter groups, e.g., fluorescein, dansyl, **biotin**, digoxigenin, N-oxy-4,4-dimethyloxazolidine, N-oxy-2,2,5,5-tetramethylpyrrolidine, texas red, tetramethylrhodamine, etc.; R3 = H, hydroxy protecting group, e.g., 4,4'-dimethoxytrityl, 9-fluorenylmethoxycarbonyl, etc.] were prepd. and used to incorporate multiple primary amino groups or reporter groups into oligodeoxyribonucleotides following the phosphoramidite methodol. It is possible to substitute any deoxyribonucleotide, deoxynucleotide, or nucleotide with the linker in conventional phosphoramidite or H-phosphonate DNA syntheses. Thus, the bis(hydroxymethyl)benzylamine I (Z = CH2; R1 = H; R2 = 9-fluorenylmethylcarbonyl; R3 = 4,4'-dimethoxytrityl; n = 1) was prepd. from 5-nitroisophthalic acid in seven steps. Application of this reagent in std. solid-support phosphoramidite oligodeoxyribonucleotide prepn. methodol. gave, e.g., 5'-GTAGATCACT-P(O)(OH)OCH2-X-CH2OH-3' [X = 1,3-(5-H2NCH2)C6H3] with 99.5% coupling efficiency.

ST achiral linker oligodeoxyribonucleotide solid phase prepn; amino group incorporation oligodeoxyribonucleotide prepn; aminomethylbenzenedimethanol linker oligodeoxyribonucleotide prepn

IT Solid phase synthesis
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT DNA
Oligodeoxyribonucleotides
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

IT 108-67-8, Mesitylene, reactions 610-27-5, 5-Nitrophthalic acid
1074-82-4, Potassium phthalimide 27072-45-3, Fluorescein isothiocyanate
28920-43-6, 9-Fluorenylmethyl chloroformate 35013-72-0 102691-36-1,
2-Cyanoethyl N,N,N',N'-tetraisopropylphosphorodiamidite
RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)
IT **99-31-0P**, 5-Aminoisophthalic acid 27129-86-8P,
3,5-Dimethylbenzyl bromide **42122-73-6P** 71176-54-0P,
5-Amino-1,3-benzenedimethanol 146335-23-1P 171082-06-7P 171082-07-8P
171082-08-9DP, LCAA-CPG polymer support 171082-09-0P 188257-47-8P
188257-48-9P 188257-49-0P 188257-50-3P 188257-51-4P 188257-52-5P
188257-53-6DP, LCAA-CPG polymer support 188257-54-7P 188257-55-8P
188257-56-9DP, LCAA-CPG polymer support
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)
IT 171717-18-3P 171717-19-4P 171717-20-7P 171717-21-8P 171717-22-9P
171844-08-9P 188366-81-6P 188366-82-7P 188366-83-8P 188366-85-0P
188366-86-1P 188420-41-9P 188420-42-0P 188420-43-1P 188420-44-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of bis(hydroxymethyl)benzylamine achiral linker reagents for oligodeoxyribonucleotide solid phase prepn.)

L5 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193

TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA,

98195, USA

SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHEs; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 1-6 (Pharmacology)
Section cross-reference(s): 78

AB Several cobalamin (Cbl) dimers have been prepd. for evaluation as potential antiproliferative agents in the treatment of AIDS-related lymphoma. The Cbl dimers were synthesized by crosslinking Cbl carboxylates, produced by acid hydrolysis of the b-, d-, and e-propionamide side chains of cyanocobalamin (CN-Cbl), through an isophthalate mol. Linking mols. were used between the Cbl carboxylates and the isophthalate moiety. The linkers were incorporated to provide a distance between the two Cbl mols. such that the dimeric Cbls might bind two mols. of transcobalamin II (TCII), the Cbl transport protein in plasma. Initially, the linking moiety used was 1,12-diaminododecane, but the resulting dimers had low aq. soly. To improve the soly. of the dimers, 4,7,10-trioxa-1,13-tridecanediamine was employed as the linking moiety. This improved the water soly. of the dimers considerably, while retaining the distance between the Cbl mols. at 41-42 .ANG. (fully extended). To introduce addnl. substitution on Cbl dimers, 5-aminoisophthalic acid was used as the crosslinking reagent. P-Iodobenzoyl and p-(tri-n-butylstannyl)benzoyl conjugates of 5-aminoisophthalate were synthesized and used to prep. Cbl dimers. The stannylbenzoyl-conjugated Cbl dimers were prepd. as precursors to be used in radioiodination reactions, and the iodobenzoyl-conjugated Cbl dimers were prepd. as HPLC stds. for the radioiodinated product. Attempts to iodinate/radioiodinate the stannylbenzoyl Cbl dimers were unsuccessful. Although an explanation for this is not readily apparent, the failure to react may be due to the lipophilicity of the linker used and the steric environment of the two Cbl moieties. A biotinylated deriv. of 5-aminoisophthalate was also synthesized and used to prep. biotinylated-Cbl dimers. In a competitive rhTCII binding assay with [57Co]CN-Cbl, Cbl dimers contg. the lipophilic diaminododecane linking moiety had decreased binding avidities compared to those of Cbl monomers substituted at the same corrin ring carboxylate. However, Cbl dimers contg. the water-solubilizing trioxadamine linker appeared to have avidities similar to those of the Cbl monomers.

ST cobalamin dimer prepn transcobalamin binding

IT 173341-40-7P 173341-41-8P 173341-42-9P 173341-43-0P 173341-44-1P
173341-46-3P 173341-47-4P 173341-48-5P 173341-52-1P 173341-53-2P
173341-54-3P 188014-66-6P 188014-67-7P 188014-68-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 12651-28-4, Transcobalamin II
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 68-19-9P, Cyanocobalamin
RL: PUR (Purification or recovery); PREP (Preparation)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

IT 58-85-5P, **Biotin 99-31-0P** 26264-28-8P 38218-55-2P
38218-77-8P 160927-56-0P 173341-26-9P 173341-31-6P 173341-49-6P
173341-51-0P 173341-59-8P 188014-58-6P 188014-59-7P 188014-60-0P
188014-61-1P 188014-62-2P 188014-63-3P 188014-64-4P 188014-65-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of cobalamin dimers and binding to human recombinant transcobalamin II)

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1991:225167 CAPLUS

DN 114:225167

TI Method of assaying substances and immunoassay element employing .beta.-D-galactosidase

IN Onishi, Akira; Kawakatsu, Satoshi; Ito, Tsukasa; Takahashi, Takenori; Fukaya, Michie

PA Konica Co., Japan

SO Eur. Pat. Appl., 61 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G01N033-58

ICS G01N033-543; G01N033-52

CC 9-1 (Biochemical Methods)

Section cross-reference(s): 15

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 328106	A2	19890816	EP 1989-102245	19890209
	EP 328106	A3	19901219		
	R: DE, GB				
	JP 01308966	A2	19891213	JP 1989-31530	19890209
	JP 01308967	A2	19891213	JP 1989-31531	19890209
PRAI	JP 1988-29632		19880209		
	JP 1988-29633		19880209		

OS MARPAT 114:225167

AB Disclosed is an assay element and a method of assaying a target substance in a fluid sample. In this method, a) the target substance; b) a substance which specifically binds to the target substance, to which a biol. active substance which does not bind to the target substance is attached, or to which a substance which specifically binds to a biol. active substance which does not bind to the target substance is attached; c) a labeled substance which is the target substance or an analog thereof labeled with .beta.-D-galactosidase, or which is a substance which specifically binds to the target substance, labeled with .beta.-D-galactosidase; d) a substance which specifically binds to the biol. active substance and which does not bind to the target substance, or the biol. active substance, which is fixed to a carrier, which carrier exists in a porous reaction layer of an assay element; and e) a substance which specifically binds to .beta.-D-galactosidase and which changes a signal originated from .beta.-D-galactosidase, which is fixed to said carrier or another carrier which exists in a porous reaction layer of an assay element, are reacted, and the change of the signal from .beta.-D-galactosidase is measured. Human IgG was detd. by mixing the sample with bis(2-hydroxyethyl)iminotris(hydroxymethyl)methane, .beta.-D-galactosidase-labeled human IgG, and **biotin**-bound anti-human IgG antibody and applying the mixt. to an immunoassay element comprising a PET film coated with 1) a soln. contg. gelatin, Triton X-100, 1,2-bis(vinylsulfonyl)ethane, and H2O; 2) a soln. contg. p-aminophenylmercuric acetate-bound Avicel (microcryst. cellulose), Triton X-100, polyvinylpyrrolidone, 5-bromo-4-chloro-3-indolyl-.beta.-D-galactopyranoside, 3,3'-(4,4'-biphenylene)-bis(2,5-diphenyl-2H-tetrazolium chloride), and n-BuOH; 3) a soln. contg. avidin-bound Avicel contg. bovine serum albumin and sucrose, Triton X-100, polyvinylpyrrolidone, and n-BuOH; and 4) a soln. contg. cellulose powder D, Triton X-100, polyvinylpyrrolidone, and n-BuOH. The element was incubated at 37.degree.

for 10 min and then the reflection d. at 546 nm was measured from the side of the support layer.

- ST galactosidase immunoassay test strip; human IgG detn galactosidase immunoassay
- IT Blood analysis
(IgG of human detn. in, by .beta.-D-galactosidase immunoassay)
- IT Antibodies
Antigens
Avidins
RL: ANST (Analytical study)
(in .beta.-D-galactosidase immunoassays)
- IT Escherichia coli
(.beta.-D-galactosidase of, in immunoassay)
- IT Immunoglobulins
RL: ANST (Analytical study)
(G, detn. of human, by .beta.-D-galactosidase immunoassay test strip)
- IT Immunoglobulins
RL: SPN (Synthetic preparation); PREP (Preparation)
(G, reaction products, with .beta.-D-galactosidase, prepn. of, for human IgG detn. by .beta.-D-galactosidase immunoassay)
- IT Analysis
(biochem., by specific binding assay using .beta.-D-galactosidase as label)
- IT Spectrochemical analysis
(fluorometric, by specific binding assay using .beta.-D-galactosidase as label)
- IT Immunochemical analysis
(immunoassay, .beta.-D-galactosidase as label in)
- IT Immunochemical analysis
(immunoassay, app., carriers for, using galactosidase label)
- IT Avidins
RL: ANST (Analytical study)
(reaction products, with cellulose, .beta.-D-galactosidase immunoassay test strip contg., for human IgG detn.)
- IT Spectrochemical analysis
(spectrophotometric, by specific binding assay using .beta.-D-galactosidase as label)
- IT Onium compounds
RL: ANST (Analytical study)
(tetrazolium, salts, in .beta.-D-galactosidase immunoassays)
- IT 369-07-3, o-Nitrophenyl-.beta.-D-galactopyranoside
RL: ANST (Analytical study)
(IgG of human detn. by .beta.-D-galactosidase immunoassay test strip contg.)
- IT 369-07-3 1158-17-4 2818-58-8 7240-90-6 15548-59-1 15572-30-2
17817-20-8 33993-25-8 55508-29-7 78261-89-9 87810-64-8
97753-82-7 99792-79-7D, derivs. 102286-67-9 126787-65-3
126787-65-3D, derivs.
RL: ANST (Analytical study)
(as enzyme substrate in .beta.-D-galactosidase immunoassays)
- IT 9031-11-2D, conjugates
RL: ANST (Analytical study)
(in immunoassays)
- IT 58-85-5, **Biotin** 5625-37-6, Piperazine-N,N'-bis(2-ethanesulfonic acid) 6976-37-0 7365-45-9 7439-97-6D, Mercury, organo compds. 7440-22-4D, Silver, organo compds. 25976-21-0 29558-05-2, p-Aminophenyl-.beta.-D-thiogalactopyranoside 107537-94-0, Galactostatin
RL: ANST (Analytical study)
(in .beta.-D-galactosidase immunoassays)
- IT 9001-46-1DP, Glutamic acid dehydrogenase, anti-human IgG antibody reaction products
RL: SPN (Synthetic preparation); PREP (Preparation)

```

      (prepn. of)
IT  58-85-5DP, Biotin, anti-human IgG antibody reaction products
    99-31-ODP, 5-Aminoisophthalic acid, Avicel reaction products
    6283-24-5DP, p-Aminophenyl mercuric acetate, cellulose reaction products
    9004-34-6DP, Cellulose, p-aminophenyl mercuric acetate reaction products
    16758-34-2DP, Avicel reaction products
    RL: SPN (Synthetic preparation); PREP (Preparation)
      (prepn. of, for human IgG detn. by .beta.-D-galactosidase immunoassay)
IT  9004-34-6, Avicel, reactions
    RL: RCT (Reactant); RACT (Reactant or reagent)
      (reaction of, with butanedioldiglycidyl ether)
IT  2425-79-8
    RL: RCT (Reactant); RACT (Reactant or reagent)
      (reaction of, with cellulose)
IT  298-95-3
    RL: ANST (Analytical study)
      (.beta.-D-galactosidase immunoassay test strip contg., for human IgG
      detn.)

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=> d his

(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

=> e linker

E1 1 LINKENBACH/BI

E2 2 LINKENS/BI

E3 12580 --> LINKER/BI

E4 6 LINKER1/BI

E5 5 LINKER2/BI

E6 1 LINKER3/BI

E7 1 LINKERA/BI

E8 1 LINKERAND/BI

E9 1 LINKERB/BI

E10 7 LINKERED/BI

E11 1 LINKERES/BI

E12 1 LINKERHAGNER/BI

=> s e3

L6 12580 LINKER/BI

=> s l3 and l6

L7 17 L3 AND L6

=> d l7 1-17

L7 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 2002:319261 CAPLUS

DN 137:59601

TI A Streptavidin-Biotin Binding System That Minimizes Blocking by Endogenous Biotin

AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan;
 Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
 CS Departments of Bioengineering, Medicine, and Radiation Oncology,
 University of Washington, Seattle, WA, 98195, USA
 SO Bioconjugate Chemistry (2002), 13(3), 588-598
 CODEN: BCCHEs; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English
 RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:137180 CAPLUS
 DN 134:178346
 TI Preparation of novel naphthalenesulfonic acids and related compounds,
 method of preparation and use as glucose uptake agonists
 IN Spevak, Wayne R.; Shi, Songyuan; Prasad, V. V. S. V. Manchem; Kozlowski,
 Michael R.; Schow, Steven R.; Lum, Robert T.; Robinson, Louise; Park,
 Jeong Weong
 PA Telik, Inc., USA
 SO PCT Int. Appl., 94 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001012591	A1	20010222	WO 2000-US20909	20000728
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,				
	CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,				
	KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,				
	MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,				
	TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,				
	RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,				
	CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	FR 2796942	A1	20010202	FR 2000-9979	20000728
	BR 2000012836	A	20020430	BR 2000-12836	20000728
	EP 1200396	A1	20020502	EP 2000-952351	20000728
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL				
	NO 2002000425	A	20020325	NO 2002-425	20020128
PRAI	US 1999-146444P	P	19990729		
	WO 2000-US20909	W	20000728		
OS	MARPAT 134:178346				

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2003 ACS
 AN 2000:35037 CAPLUS
 DN 132:90367
 TI Trifunctional reagent for conjugation to a biomolecule for use in
 diagnosis and therapy
 IN Wilbur, D. Scott; Sandberg, Bengt E. B.
 PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
 Technology AB
 SO PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Department of Radiation Oncology, University of Washington, USA; Mitra Medical Technology AB

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			

AU 9883663	A1	20000124	AU 1998-83663	19980707
CA 2336739	AA	20000113	CA 1999-2336739	19990707
WO 2000002051	A1	20000113	WO 1999-SE1241	19990707

W: AE, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9950767	A1	20000124	AU 1999-50767	19990707
EP 1095274	A1	20010502	EP 1999-935251	19990707

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 2002519440	T2	20020702	JP 2000-558395	19990707
NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707

WO 1999-SE1241 W 19990707

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1999:668186 CAPLUS
DN 132:46430
TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing Covalently Attached Ligands
AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger, Ronald
CS Lash Miller Laboratories Department of Chemistry, University of Toronto, Toronto, ON, M5S 3H6, Can.
SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHE5; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:46430

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral **linker** reagents for direct labeling of oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776603 CAPLUS
DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776598 CAPLUS

DN 130:38641

TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
modulating agents

IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.

PA Receptagen Corporation, USA; University of Washington

SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6083926	A	20000704	US 1998-200422	19981123

PRAI US 1994-224831 B2 19940408
 US 1995-406191 A2 19950316
 US 1995-406192 A2 19950316
 US 1995-406194 A2 19950316
 WO 1995-US4404 A2 19950407
 US 1995-545151 A 19951019
 US 1995-545496 A 19951019
 WO 1996-US16672 W 19961018

OS MARPAT 130:38641

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 1997:594715 CAPLUS

DN 127:262560

TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin derived domains

IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu

PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu

SO PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731899	A1	19970904	WO 1997-US3157	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9721927	A1	19970916	AU 1997-21927	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3157	W	19970228		
	US 2000-690797	B1	20001017		

OS MARPAT 127:262560

L7 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 1997:594714 CAPLUS

DN 127:247960

TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin-derived domains

IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu

PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731898	A1	19970904	WO 1997-US3137	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9719809	A1	19970916	AU 1997-19809	19970228
	AU 731826	B2	20010405		
	EP 888303	A1	19990107	EP 1997-907937	19970228
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000505475	T2	20000509	JP 1997-531139	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3137	W	19970228		
	US 2000-690797	B1	20001017		
OS	MARPAT 127:247960				

L7 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1997:377886 CAPLUS
DN 126:343813
TI Preparation of vitamin B12 receptor modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
SO PCT Int. Appl., 97 pp.
CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG				
	US 5840712	A	19981124	US 1995-545151	19951019
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRAI US 1995-545151 A 19951019
 US 1995-545496 A 19951019
 US 1994-224831 B2 19940408
 US 1995-406191 A2 19950316
 US 1995-406192 A2 19950316
 US 1995-406194 A2 19950316
 WO 1996-US16672 W 19961018
 OS MARPAT 126:343813

L7 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:251007 CAPLUS
 DN 126:238622
 TI A new achiral **linker** reagent for the incorporation of multiple
 amino groups into oligonucleotides
 IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
 Dahl, Otto
 PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen,
 John; Dahl, Otto
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		
OS	MARPAT 126:238622				

L7 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:155067 CAPLUS
 DN 126:207193
 TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin
 Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
 AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon;
 Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHE; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

L7 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:61195 CAPLUS
 DN 126:70131
 TI Catalytic antibodies for activation of carbamate-containing prodrugs and
 their use in ADAPT (Antibody-Directed Abzyme Prodrug Therapy)
 IN Blackburn, George Michael; Wentworth, Paul
 PA Zeneca Limited, UK
 SO Eur. Pat. Appl., 141 pp.
 CODEN: EPXXDW
 DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 745673	A2	19961204	EP 1996-303643	19960522
	EP 745673	A3	20020731		
	R: CH, DE, FR, GB, IT, LI				
	US 5807688	A	19980915	US 1996-653060	19960524
PRAI	GB 1995-10830	A	19950527		
OS	MARPAT 126:70131				

L7 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 1996:417799 CAPLUS

DN 125:86501

TI Preparation of linked piperidinecarboxylate moieties as immunophilin multimerizing agents

IN Holt, Dennis A.; Schreiber, Stuart; Keenan, Terence; Guo, Tao; Laborde, Edgardo

PA Ariad Gene Therapeutics, Inc., USA; Laborde, Edgardo

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9606097	A1	19960229	WO 1995-US10559	19950818
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2197793	AA	19960229	CA 1995-2197793	19950818
	AU 9533679	A1	19960314	AU 1995-33679	19950818
	EP 776327	A1	19970604	EP 1995-930217	19950818
	R: AT, CH, DE, ES, FR, GB, LI, SE				
	JP 10504571	T2	19980506	JP 1995-508225	19950818
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1994-292598	A	19940818		
	US 1995-479694	A	19950607		
	US 1995-793016	B2	19950818		
	WO 1995-US10559	W	19950818		
	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1997-808276	A1	19970228		
	US 2000-690797	B1	20001017		
OS	MARPAT 125:86501				

L7 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2003 ACS

AN 1995:996981 CAPLUS

DN 124:176815

TI Preparation of vitamin B12 derivatives as receptor modulating agents for treating cancers

IN Morgan, A. Charles; Wilbur, D. Scott; Pathare, Pradip M.

PA USA

SO PCT Int. Appl., 101 pp.

CODEN: PIXXD2

DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	A	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		
OS	MARPAT 124:176815				

L7 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2003 ACS
AN 1995:752263 CAPLUS
DN 124:30215
TI A new achiral reagent for the incorporation of multiple amino groups into oligonucleotides
AU Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John; Buchardt, Ole; Dahl, Otto
CS Dep. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SO Bioorganic & Medicinal Chemistry Letters (1995), 5(16), 1785-90
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier
DT Journal
LA English

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6

=> s 15 and 17

L8 10 L5 AND L7

=> d 18 1-10

L8 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 2002:319261 CAPLUS
DN 137:59601
TI A Streptavidin-**Biotin** Binding System That Minimizes Blocking by
Endogenous **Biotin**
AU Hamblett, Kevin J.; Kegley, Brian B.; Hamlin, Don K.; Chyan, Ming-Kuan;
Hyre, David E.; Press, Oliver W.; Wilbur, D. Scott; Stayton, Patrick S.
CS Departments of Bioengineering, Medicine, and Radiation Oncology,
University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (2002), 13(3), 588-598
CODEN: BCCHE; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 2000:35037 CAPLUS
DN 132:90367
TI Trifunctional reagent for conjugation to a biomolecule for use in
diagnosis and therapy
IN Wilbur, D. Scott; Sandberg, Bengt E. B.
PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
Technology AB
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103

PRAI WO 1998-SE1345 A 19980707
WO 1999-SE1241 W 19990707

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in
diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Department of Radiation Oncology, University of Washington, USA; Mitra
Medical Technology AB

SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:				
				AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG	
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:				
				AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM	
	RW:			GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG	
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R:			AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO	
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 1999:668186 CAPLUS

DN 132:46430

TI Molecular Necklaces. Cross-Linking Hemoglobin with Reagents Containing
Covalently Attached Ligands

AU Crapatureanu, Sanda; Serbanescu, Ruxandra; Brevitt, Sharon Bisley; Kluger,
Ronald

CS Lash Miller Laboratories Department of Chemistry, University of Toronto,
Toronto, ON, M5S 3H6, Can.

SO Bioconjugate Chemistry (1999), 10(6), 1058-1067
CODEN: BCCHE; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:46430
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1999:140535 CAPLUS
DN 130:267698
TI Synthesis of achiral **linker** reagents for direct labeling of
oligonucleotides on solid supports
AU Behrens, Carsten; Dahl, Otto
CS Department of Chemistry, University of Copenhagen, Copenhagen, DK-2100,
Den.
SO Nucleosides & Nucleotides (1999), 18(2), 291-305
CODEN: NUNUD5; ISSN: 0732-8311
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS
AN 1998:776603 CAPLUS
DN 130:38642
TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
modulating agents
IN Morgan, A. Charles, Jr.; Wilbur, D. Scott
PA Receptagen Corporation, USA; University of Washington
SO U.S., 50 pp., Cont.-in-part of U.S. Ser. No. 224,831, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840880	A	19981124	US 1995-406191	19950316
	CA 2187346	AA	19951019	CA 1995-2187346	19950407
	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 5840712	A	19981124	US 1995-545151	19951019
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS

AN 1998:776598 CAPLUS
 DN 130:38641
 TI Preparation of water soluble vitamin B12 as antiinflammatory receptor
 modulating agents
 IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
 PA Receptagen Corporation, USA; University of Washington
 SO U.S., 66 pp., Cont.-in-part of U.S. Ser. No. 406,191.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5840712	A	19981124	US 1995-545151	19951019
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG			
	AU 9677182	A1	19970507	AU 1996-77182	19961018
	EP 1015475	A1	20000705	EP 1996-940247	19961018
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	B2	19940408		
	US 1995-406191	A2	19950316		
	US 1995-406192	A2	19950316		
	US 1995-406194	A2	19950316		
	WO 1995-US4404	A2	19950407		
	US 1995-545151	A	19951019		
	US 1995-545496	A	19951019		
	WO 1996-US16672	W	19961018		

OS MARPAT 130:38641
 RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:377886 CAPLUS
 DN 126:343813
 TI Preparation of vitamin B12 receptor modulating agents
 IN Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip M.
 PA Receptagen Corporation, USA; University of Washington; Morgan, A. Charles, Jr.; Wilbur, D. Scott; Pathare, Pradip, M.
 SO PCT Int. Appl., 97 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9714711	A1	19970424	WO 1996-US16672	19961018
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG
 US 5840712 A 19981124 US 1995-545151 19951019
 AU 9677182 A1 19970507 AU 1996-77182 19961018
 EP 1015475 A1 20000705 EP 1996-940247 19961018
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI

PRAI US 1995-545151 A 19951019
 US 1995-545496 A 19951019
 US 1994-224831 B2 19940408
 US 1995-406191 A2 19950316
 US 1995-406192 A2 19950316
 US 1995-406194 A2 19950316
 WO 1996-US16672 W 19961018
 OS MARPAT 126:343813

L8 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:251007 CAPLUS
 DN 126:238622

TI A new achiral **linker** reagent for the incorporation of multiple
 amino groups into oligonucleotides
 IN Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
 Dahl, Otto
 PA Behrens, Carsten, Den.; Petersen, Kenneth H.; Egholm, Michael; Nielsen,
 John; Dahl, Otto
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9705156	A1	19970213	WO 1996-DK330	19960726
	W: AL, AM, AT, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT				
	AU 9665140	A1	19970226	AU 1996-65140	19960726
PRAI	DK 1995-863		19950727		
	WO 1996-DK330		19960726		
OS	MARPAT 126:238622				

L8 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:155067 CAPLUS
 DN 126:207193
 TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin
 Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
 AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon;
 Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHES; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

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FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6
L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1
E BIOTIN
L4 22854 S E3
L5 15 S L3 AND L4
E LINKER
L6 12580 S E3
L7 17 S L3 AND L6
L8 10 S L5 AND L7

=> s 17 not 15
L9 7 L7 NOT L5

=> d 19 1-7

L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 2001:137180 CAPLUS
DN 134:178346
TI Preparation of novel naphthalenesulfonic acids and related compounds,
method of preparation and use as glucose uptake agonists
IN Spevak, Wayne R.; Shi, Songyuan; Prasad, V. V. S. V. Manchem; Kozlowski,
Michael R.; Schow, Steven R.; Lum, Robert T.; Robinson, Louise; Park,
Jeong Weong
PA Telik, Inc., USA
SO PCT Int. Appl., 94 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001012591	A1	20010222	WO 2000-US20909	20000728
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	FR 2796942	A1	20010202	FR 2000-9979	20000728
	BR 2000012836	A	20020430	BR 2000-12836	20000728
	EP 1200396	A1	20020502	EP 2000-952351	20000728
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
	NO 2002000425	A	20020325	NO 2002-425	20020128
PRAI	US 1999-146444P	P	19990729		
	WO 2000-US20909	W	20000728		

OS MARPAT 134:178346

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 1997:594715 CAPLUS
 DN 127:262560
 TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin derived domains
 IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
 PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
 SO PCT Int. Appl., 98 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731899	A1	19970904	WO 1997-US3157	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2244363	AA	19970904	CA 1997-2244363	19970228
	AU 9721927	A1	19970916	AU 1997-21927	19970228
	US 6133456	A	20001017	US 1997-808276	19970228
	US 6150527	A	20001121	US 1997-808274	19970228
	US 2002161240	A1	20021031	US 2002-86506	20020228
PRAI	US 1996-12432P	P	19960228		
	US 1996-24861P	P	19960828		
	US 1996-33035P	P	19961210		
	US 1994-292598	B2	19940818		
	US 1995-479694	A2	19950607		
	US 1995-793016	B2	19950818		
	US 1997-808276	A1	19970228		
	WO 1997-US3157	W	19970228		
	US 2000-690797	B1	20001017		
OS	MARPAT 127:262560				

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:594714 CAPLUS
 DN 127:247960
 TI Synthetic derivatives of rapamycin as multimerizing agents for chimeric proteins with immunophilin-derived domains
 IN Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
 PA Ariad Gene Therapeutics, Inc., USA; Holt, Dennis A.; Keenan, Terence P.; Guo, Tao; Laborde, Edgardo; Yang, Wu
 SO PCT Int. Appl., 116 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731898	A1	19970904	WO 1997-US3137	19970228
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,				

ML, MR, NE, SN, TD, TG
 CA 2244363 AA 19970904 CA 1997-2244363 19970228
 AU 9719809 A1 19970916 AU 1997-19809 19970228
 AU 731826 B2 20010405
 EP 888303 A1 19990107 EP 1997-907937 19970228
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI

JP 2000505475 T2 20000509 JP 1997-531139 19970228
 US 6133456 A 20001017 US 1997-808276 19970228
 US 6150527 A 20001121 US 1997-808274 19970228
 US 2002161240 A1 20021031 US 2002-86506 20020228
 PRAI US 1996-12432P P 19960228
 US 1996-24861P P 19960828
 US 1996-33035P P 19961210
 US 1994-292598 B2 19940818
 US 1995-479694 A2 19950607
 US 1995-793016 B2 19950818
 US 1997-808276 A1 19970228
 WO 1997-US3137 W 19970228
 US 2000-690797 B1 20001017
 OS MARPAT 127:247960

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:61195 CAPLUS
 DN 126:70131
 TI Catalytic antibodies for activation of carbamate-containing prodrugs and
 their use in ADAPT (Antibody-Directed Abzyme Prodrug Therapy)
 IN Blackburn, George Michael; Wentworth, Paul
 PA Zeneca Limited, UK
 SO Eur. Pat. Appl., 141 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 745673	A2	19961204	EP 1996-303643	19960522
	EP 745673	A3	20020731		
	R: CH, DE, FR, GB, IT, LI				
	US 5807688	A	19980915	US 1996-653060	19960524
PRAI	GB 1995-10830	A	19950527		
OS	MARPAT 126:70131				

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS
 AN 1996:417799 CAPLUS
 DN 125:86501
 TI Preparation of linked piperidinecarboxylate moieties as immunophilin
 multimerizing agents
 IN Holt, Dennis A.; Schreiber, Stuart; Keenan, Terence; Guo, Tao; Laborde,
 Edgardo
 PA Ariad Gene Therapeutics, Inc., USA; Laborde, Edgardo
 SO PCT Int. Appl., 55 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9606097	A1	19960229	WO 1995-US10559	19950818
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,				

TM, TT
 RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
 LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
 SN, TD, TG

CA	2197793	AA	19960229	CA	1995-2197793	19950818
AU	9533679	A1	19960314	AU	1995-33679	19950818
EP	776327	A1	19970604	EP	1995-930217	19950818
R: AT, CH, DE, ES, FR, GB, LI, SE						
JP	10504571	T2	19980506	JP	1995-508225	19950818
US	6133456	A	20001017	US	1997-808276	19970228
US	6150527	A	20001121	US	1997-808274	19970228
US	2002161240	A1	20021031	US	2002-86506	20020228
PRAI	US 1994-292598	A	19940818			
	US 1995-479694	A	19950607			
	US 1995-793016	B2	19950818			
WO	1995-US10559	W	19950818			
US	1996-12432P	P	19960228			
US	1996-24861P	P	19960828			
US	1996-33035P	P	19961210			
US	1997-808276	A1	19970228			
US	2000-690797	B1	20001017			
OS	MARPAT 125:86501					

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
 AN 1995:996981 CAPLUS
 DN 124:176815
 TI Preparation of vitamin B12 derivatives as receptor modulating agents for
 treating cancers
 IN Morgan, A. Charles; Wilbur, D. Scott; Pathare, Pradip M.
 PA USA
 SO PCT Int. Appl., 101 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9527723	A1	19951019	WO 1995-US4404	19950407
	W: AU, CA, JP, KR, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5739287	A	19980414	US 1995-406192	19950316
	US 5840880	A	19981124	US 1995-406191	19950316
	US 5869465	A	19990209	US 1995-406194	19950316
	AU 9522835	A1	19951030	AU 1995-22835	19950407
	EP 754189	A1	19970122	EP 1995-916284	19950407
	EP 754189	B1	20021009		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10502334	T2	19980303	JP 1995-526497	19950407
	AT 225799	E	20021015	AT 1995-916284	19950407
	US 6083926	A	20000704	US 1998-200422	19981123
PRAI	US 1994-224831	A	19940408		
	US 1995-406191	A	19950316		
	US 1995-406192	A	19950316		
	US 1995-406194	A	19950316		
	WO 1995-US4404	W	19950407		
	US 1995-545151	A3	19951019		
OS	MARPAT 124:176815				

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
 AN 1995:752263 CAPLUS
 DN 124:30215
 TI A new achiral reagent for the incorporation of multiple amino groups into

oligonucleotides
AU Behrens, Carsten; Petersen, Kenneth H.; Egholm, Michael; Nielsen, John;
Buchardt, Ole; Dahl, Otto
CS Dep. Chem., Univ. Copenhagen, Copenhagen, DK-2100, Den.
SO Bioorganic & Medicinal Chemistry Letters (1995), 5(16), 1785-90
CODEN: BMCLE8; ISSN: 0960-894X
PB Elsevier
DT Journal
LA English

=> d his

(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6

L8 10 S L5 AND L7

L9 7 S L7 NOT L5

=> s tridecanediamine

L10 71 TRIDECANEDIAMINE

=> s avidin

L11 6520 AVIDIN

=> s l10 and l11

L12 3 L10 AND L11

=> d l12 1-3

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2002:523951 CAPLUS

DN 137:228855

TI Trifunctional conjugation reagents. Reagents that contain a biotin and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies

AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (2002), 13(5), 1079-1092

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS

AN 2001:923565 CAPLUS

DN 136:42919
 TI Biotin derivatives for an extracorporeal device
 IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
 PA Mitra Medical Technology AB, Swed.; University of Washington
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
 AN 1996:664622 CAPLUS
 DN 126:3868
 TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab' Colocalization with Recombinant Streptavidin and **Avidin**
 AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.; Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.; Weerawarna, S. Ananda
 CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
 SO Bioconjugate Chemistry (1996), 7(6), 689-702
 CODEN: BCCHES; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

=> d his

(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6
L8 10 S L5 AND L7
L9 7 S L7 NOT L5
L10 71 S TRIDECANEDIAMINE
L11 6520 S AVIDIN
L12 3 S L10 AND L11

=> d l10 and l4
L4 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l10 and l4
L13 15 L10 AND L4

=> d l13 1-15

L13 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:869122 CAPLUS
DN 137:364361
TI Methods for fragmenting and labeling nucleic acids for diagnosis of
diseases
IN Bourget, Cecile; Kotera, Mitsuharu; Lhomme, Jean; Trevisiol, Emmanuelle;
Laayoun, Ali; Tora, Christelle; Sothier, Isabelle
PA Bio Merieux, Fr.; Universite Joseph Fourier (Grenoble 1); Centre National
De La Recherche Scientifique
SO PCT Int. Appl., 161 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002090584	A2	20021114	WO 2002-FR1542	20020503
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	FR 2824335	A1	20021108	FR 2001-6039	20010504
PRAI	FR 2001-6039	A	20010504		
OS	MARPAT 137:364361				

L13 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS
AN 2002:868900 CAPLUS
DN 137:371372
TI Indicator dyes, their production and their use in detecting biological
molecules
IN Bourget, Cecile; Lhomme, Jean; Laayoun, Ali; Kotera, Mitsuharu; Trevisiol,
Emmanuelle; Menou, Lionel; Bernal Mendez, Eloy
PA Bio Merieux, Fr.; Universite Joseph Fourier (Grenoble 1); Centre National
De La Recherche Scientifique
SO PCT Int. Appl., 219 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2002090319 A1 20021114 WO 2002-FR1543 20020503
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
 TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
 FR 2824323 A1 20021108 FR 2001-6040 20010504
 PRAI FR 2001-6040 A 20010504
 OS MARPAT 137:371372
 RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:523951 CAPLUS
 DN 137:228855
 TI Trifunctional conjugation reagents. Reagents that contain a **biotin**
 and a radiometal chelation moiety for application to extracorporeal
 affinity adsorption of radiolabeled antibodies
 AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
 Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (2002), 13(5), 1079-1092
 CODEN: BCCHES; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English
 RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:923565 CAPLUS
 DN 136:42919
 TI **Biotin** derivatives for an extracorporeal device
 IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune
 PA Mitra Medical Technology AB, Swed.; University of Washington
 SO PCT Int. Appl., 45 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W:		AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ		
	RW:		GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
	US 2002159994	A1	20021031	US 2001-881213	20010615

AU 2001074761 A5 20011224 AU 2001-74761 20010618
 PRAI SE 2000-2287 A 20000616
 US 2000-216625P P 20000707
 WO 2001-SE1374 W 20010618

L13 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2001:816683 CAPLUS

DN 135:353710

TI eTag reporter compounds for oligonucleotide and protein labeling and identification

IN Singh, Sharat; Matray, Tracy; Salinmi-moosavi, Hussein

PA Aclara Biosciences, Inc., USA

SO PCT Int. Appl., 95 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001083502	A1	20011108	WO 2000-US29724	20001027
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2000-561579 A 20000428

US 2000-602586 A 20000621

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2001:284303 CAPLUS

DN 135:42876

TI Peptide and small molecule microarray for high throughput cell adhesion and functional assays

AU Falsey, James R.; Renil, M.; Park, Steven; Li, Shijun; Lam, Kit S.

CS UC Davis Cancer Center Division of Hematology/Oncology and Department of Internal Medicine, University of California Davis, Sacramento, CA, 95817, USA

SO Bioconjugate Chemistry (2001), 12(3), 346-353

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2001:215618 CAPLUS

DN 135:15624

TI Surface Characterization of Mixed Self-Assembled Monolayers Designed for Streptavidin Immobilization

AU Nelson, Kjell E.; Gamble, Lara; Jung, Linda S.; Boeckl, Maximiliane S.; Naeemi, Esmaeel; Golledge, Stephen L.; Sasaki, Tomikazu; Castner, David G.; Campbell, Charles T.; Stayton, Patrick S.

CS Department of Bioengineering Department of Chemistry and Department of Chemical Engineering, University of Washington, Seattle, WA, 98195, USA

SO Langmuir (2001), 17(9), 2807-2816

CODEN: LANGD5; ISSN: 0743-7463

PB American Chemical Society

DT Journal

LA English

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2001:201927 CAPLUS

TI Synthesis and evaluation of protein biotinylation reagents that also
contain UV and/or fluorescence absorbing moieties

AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E.
B.

CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA

SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031

CODEN: ACSRAL; ISSN: 0065-7727

PB American Chemical Society

DT Journal; Meeting Abstract

LA English

L13 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 2000:145059 CAPLUS

DN 132:191408

TI Rapid quantitative analysis of proteins or protein function in complex
mixtures using affinity labeling reagents and mass spectrometry

IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C.
Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate

PA University of Washington, USA

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
	W: AU, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1999:255414 CAPLUS

DN 131:70769

TI Site-Specific Modification of a Single-Chain Antibody Using a Novel
Glyoxyl-yl-Based Labeling Reagent

AU Zhao, Zhan G.; Im, Jin S.; Lam, Kit S.; Lake, Douglas F.

CS Arizona Cancer Center, Tucson, AZ, 85724, USA

SO Bioconjugate Chemistry (1999), 10(3), 424-430

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:708440 CAPLUS

DN 127:298612

TI **Biotin** Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro Evaluation of **Biotin** Dimers and Trimers for Crosslinking of Streptavidin

AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(6), 819-832

CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

L13 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:542454 CAPLUS

DN 127:220519

TI Preparation of **biotin** containing compounds with water soluble linker moieties for use as radionuclides and streptavidin crosslinking agents

IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin, Donald K.

PA Board of Regents of the University of Washington, USA

SO PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9720524	A1	19970828	AU 1997-20524	19970207
PRAI	US 1996-11321P	P	19960208		
	WO 1997-US2560	W	19970207		

L13 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS

AN 1997:433652 CAPLUS

DN 127:121587

TI **Biotin** reagents for antibody pretargeting. Synthesis, radioiodination and in vitro evaluation of water soluble, biotinidase resistant **biotin** derivatives

AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(4), 572-584
 CODEN: BCCHEs; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

L13 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:155067 CAPLUS
 DN 126:207193
 TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin
 Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
 AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon;
 Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(2), 161-172
 CODEN: BCCHEs; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

L13 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS
 AN 1996:664622 CAPLUS
 DN 126:3868
 TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab'
 Colocalization with Recombinant Streptavidin and Avidin
 AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.;
 Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.;
 Weerawarna, S. Ananda
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1996), 7(6), 689-702
 CODEN: BCCHEs; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

=> d his

(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6

L8 10 S L5 AND L7

L9 7 S L7 NOT L5

L10 71 S TRIDECANEDIAMINE

L11 6520 S AVIDIN

L12 3 S L10 AND L11

L13 15 S L10 AND L4

=> s l13 not l5
L14 12 L13 NOT L5

=> s l13 not l7
L15 14 L13 NOT L7

=> s l15 not l14
L16 2 L15 NOT L14

=> d l16 1-2 all

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS

AN 2002:523951 CAPLUS

DN 137:228855

TI Trifunctional conjugation reagents. Reagents that contain a **biotin** and a radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies

AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (2002), 13(5), 1079-1092

CODEN: BCCHE5; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 9-14 (Biochemical Methods)

Section cross-reference(s): 8, 15, 63

AB A method of removing radiolabeled monoclonal antibodies (mAbs) from blood using a device external to the body, termed extracorporeal affinity-adsorption (EAA), is being evaluated as a means of decreasing irradiation of noncancerous tissues in therapy protocols. The EAA device uses an avidin column to capture biotinylated-radiolabeled mAbs from circulated blood. In this investigation, three trifunctional reagents have been developed to minimize the potential deleterious effect on antigen binding brought about by the combination of radiolabeling and biotinylation of mAbs required in the EAA approach. The studies focused on radiolabeling with ¹¹¹In and ⁹⁰Y, so the chelates CHX-A''-DTPA and DOTA, which form stable attachments to these radionuclides, were incorporated in the trifunctional reagents. The first trifunctional reagent prep'd. did not incorporate a group to block the **biotin** cleaving enzyme biotinidase, but the two subsequent reagents coupled aspartic acid to the **biotin** carboxylate for that purpose. All three reagents used 4,7,10-trioxo-1,13-**tridecanediamine** as water-sol. spacers between an aminoisophthalate core and the **biotin** or chelation group. The mAb conjugates were radioiodinated to evaluate cell binding as a function of substitution. Radioiodination was used so that a direct comparison with unmodified mAb could be made. Evaluation of the no. of conjugates per antibody vs. cell binding immunoreactivities indicated that minimizing the no. of conjugates was best. Interestingly, a decrease of radioiodination yield as a function of the no. of isothiocyanate contg. conjugates per mAb was noted. The decreased yields were presumably due to the presence of thiourea functionality formed in the conjugation reaction. Radiolabeling with ¹¹¹In and ⁹⁰Y was facile at room temp. for conjugates contg. the CHX-A'', but elevated temp. (e.g., 45.degree.) was required to obtain good yields with the DOTA chelate. Stability of ⁹⁰Y labeled mAb in serum, and when challenged with 10 mM EDTA, was high. However, challenging the ⁹⁰Y labeled mAb with 10 mM DTPA demonstrated high stability for the DOTA contg. conjugate, but low stability for the CHX-A'' contg. conjugate. Thus, the choice between these two chelating moieties might be made on requirements for facile and gentle labeling vs. very high in vivo stability. Application of the trifunctional biotinylation reagents to the

blood clearance of labeled antibodies in EAA is under investigation. The new reagents may also be useful for other applications.

ST trifunctional conjugation reagent **biotin** radiometal chelation

IT Antibodies

RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)

(monoclonal; trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT Affinity

Blood analysis

Blood serum

Chelation

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT Chelates

Radionuclides, analysis

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 10098-91-6, Yttrium-90, analysis 15750-15-9, Indium-111, analysis

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 99-31-0 127985-74-4 137174-07-3 178446-63-4 183896-00-6

194920-62-2 295322-53-1 459134-72-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 380607-61-4P 459134-70-4P 459134-73-7P 459134-74-8P 459134-75-9P

459134-76-0P 459409-35-9P 459409-37-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

IT 459134-77-1P 459134-78-2P 459409-36-0P 459409-38-2P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(trifunctional conjugation reagents. reagents that contain **biotin** and radiometal chelation moiety for application to extracorporeal affinity adsorption of radiolabeled antibodies)

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Axworthy, D; Proc Natl Acad Sci U S A 2000, V97, P1802 CAPLUS

(2) Baker, H; Ann N Y Acad Sci 1985, V447, P129 CAPLUS

(3) Bayer, E; Immunoassay 1996, P237 CAPLUS

(4) Bernstein, K; Biochem Biophys Res Commun 1990, V167, P310 CAPLUS

(5) Bosch, T; Artif Organs 2000, V24, P696 CAPLUS

(6) Brechbiel, M; J Chem Soc, Perkin Trans 1 1992, P1173 CAPLUS

(7) Brown, L; Prostate Cancer Prostatic Dis 1998, V1, P208 CAPLUS

(8) Chauhan, J; Ann N Y Acad Sci 1985, V447, P386 CAPLUS

(9) Chen, J; Cancer Biother Radiopharm 1996, V11, P217 CAPLUS

(10) Chen, J; J Nucl Med 1997, V38, P1934 CAPLUS

(11) Chen, J; Tumor Targeting 1996, V2, P204 CAPLUS

(12) Chinol, M; Radioimmunotherapy of Cancer 2000, P169

(13) Deguchi, Y; Bioconjugate Chem 1999, V10, P32 CAPLUS

(14) Diamandis, E; Clin Chem 1991, V37, P625 CAPLUS

- (15) Gamper, H; Nucleic Acids Res 1993, V21, P145 CAPLUS
- (16) Garkavij, M; Acta Oncol 1996, V35, P309 MEDLINE
- (17) Garkavij, M; Acta Oncol 1996, V35, P309 MEDLINE
- (18) Garkavij, M; Cancer Res 1995, V55, P5874S CAPLUS
- (19) Garkavij, M; Clin Cancer Res 1999, V5, P3059s CAPLUS
- (20) Garkavij, M; Doctoral Dissertation, Lund University 1996
- (21) Garkavij, M; J Nucl Med 1997, V38, P895 MEDLINE
- (22) Garkavij, M; J Nucl Med 1997, V38, P895 MEDLINE
- (23) Goodwin, D; Cancer (Suppl) 1997, V80, P2675 MEDLINE
- (24) Green, N; Adv Prot Chem 1975, V29, P85 CAPLUS
- (25) Green, N; Biochem J 1965, V94, P23
- (26) Hamblett, K; Bioconjugate Chem 2002, V13, P588 CAPLUS
- (27) Hamlin, D; Isotope Production and Applications in the 21st Century 2000, P353 CAPLUS
- (28) Hashimoto, M; ChemBio Chem 2001, V2, P52 CAPLUS
- (29) Hymes, J; Methods Enzymol 1997, V279, P422 CAPLUS
- (30) Kairemo, K; Acta Oncol 1996, V35, P343 MEDLINE
- (31) Kobayashi, H; J Nucl Med 1998, V39, P829 CAPLUS
- (32) Larson, S; Encyclopedia of Cancer 1997, P1420
- (33) Lewis, M; Bioconjugate Chem 1994, V5, P565 CAPLUS
- (34) Li, M; Bioconjugate Chem 1993, V4, P275 CAPLUS
- (35) Mirzadeh, S; Bioconjugate Chem 1990, V1, P59 CAPLUS
- (36) Pippin, C; Bioconjugate Chem 1992, V3, P342 CAPLUS
- (37) Pispá, J; Ann Med Exptl Bio Fenniae 1965, V43, P3
- (38) Polli, J; Biochem J 1991, V275, P733 CAPLUS
- (39) Press, O; Blood 2001, V98, P2535 CAPLUS
- (40) Rosebrough, S; Lab Anim Sci 1995, V45, P554 CAPLUS
- (41) Roselli, M; Cancer Biother Radiopharm 1999, V14, P209 CAPLUS
- (42) Rusckowski, M; Nucl Med Biol 1997, V24, P263 CAPLUS
- (43) Schetters, H; Biomol Eng Dec 1999, V16, P73 CAPLUS
- (44) Silver, D; Clin Cancer Res 1997, V3, P81 MEDLINE
- (45) Stigbrand, T; Acta Oncol 1996, V35, P259 MEDLINE
- (46) Stoldt, H; Eur J Cancer 1997, V33, P186 MEDLINE
- (47) Strand, S; Radioimmunotherapy of Cancer 2000, P223
- (48) Tennvall, J; Cancer 1997, V80, P2411 CAPLUS
- (49) Theodore, L; Radioimmunotherapy of Cancer 2000, P195
- (50) Vessella, R; Cancer Res 1985, V45, P6131 CAPLUS
- (51) Vessella, R; NCI Monogr 1987, V3, P159
- (52) Walker, J; Basic Protein and Peptide Protocols 1994, P5 CAPLUS
- (53) White, C; Annu Rev Med 2001, V52, P125 CAPLUS
- (54) Wilbur, D; Abstr Pap-Am Chem Soc 2001, V221
- (55) Wilbur, D; Bioconjugate Chem 1996, V7, P689 CAPLUS
- (56) Wilbur, D; Bioconjugate Chem 1998, V9, P322 CAPLUS
- (57) Wilbur, D; Bioconjugate Chem 2001, V12, P616 CAPLUS
- (58) Wilbur, D; Bioconjugate Chem 2001, V12, P616 CAPLUS
- (59) Wilbur, D; J Labeled Cpd Radiopharm 2001, V44, PS973
- (60) Wilchek, M; Methods Enzymol 1990, V184, P5 CAPLUS
- (61) Wolf, B; Methods Enzymol 1990, V184, P103 CAPLUS
- (62) Zhang, S; Clin Cancer Res 1998, V4, P295 CAPLUS

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

AN 2001:923565 CAPLUS

DN 136:42919

TI **Biotin** derivatives for an extracorporeal device

IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune

PA Mitra Medical Technology AB, Swed.; University of Washington

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 26

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		
AB	A method for the conditioning of an extracorporeal device is described, as well as a method for extracorporeal extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) asoln. contg. a reagent comprising biotin moieties, such as natural biotin or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (ii) an extracorporeal device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.				
ST	biotin deriv prepn reagent extracorporeal toxin extn; body fluid toxin extn extracorporeal biotin reagent				
IT	Histocompatibility antigens				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (HLA, antibodies against; prepn. of biotin derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)				
IT	Imaging				
	(NMR; prepn. of biotin derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)				
IT	Intercalation				
	(agents; prepn. of biotin derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)				
IT	Antibodies				
	RL: REM (Removal or disposal); PROC (Process) (anti-blood group; prepn. of biotin derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)				
IT	Blood-group substances				
	RL: BSU (Biological study, unclassified); BIOL (Biological study) (antibodies against; prepn. of biotin derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)				
IT	Avidins				
	RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (biotin derivs.-binding coatings; prepn. of biotin				

derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunity
(cells involved in, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with agarose; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Animal cell
(diseased, removal of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(endotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(enterotoxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Circulation
Extraction
(extracorporeal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelating agents
(for radionuclides; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Immunoglobulins
RL: REM (Removal or disposal); PROC (Process)
(fragments; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, conjugates, with dibiotin compd.; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(monoclonal; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Amino group
Blood
Body fluid
Carboxyl group
Chemotherapy
Cytotoxic agents
Dyes
Extraction columns
Hydroxyl group
(prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Chelates
 Cytokines
 Metals, processes
 Oligodeoxyribonucleotides
 Peptides, processes
 Radionuclides, processes
 Toxins
 Tumor necrosis factors
 RL: REM (Removal or disposal); PROC (Process)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Diagnosis
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Positron-emission tomography
 Scintigraphy
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Transplant and Transplantation
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids prior to transplantation)

IT Bacteria (Eubacteria)
 Virus
 (toxins; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Disease, animal
 (treatment; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (tribiotinylated; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
 (uptake, monitoring of; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT Antibodies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (xenoantibodies, antibodies against; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (**biotin** derivs.-binding coatings; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, **Biotin** 99-31-0, 5-Aminoisophthalic acid 4246-51-9,
 4,7,10,Trioxa-1,13-**tridecanediamine** 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8

RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P
 380607-56-7P 380607-60-3P 380607-61-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 380607-52-3P 380607-54-5P

RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P
 380607-58-9P 380607-59-0P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0, 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-**biotin** 1784-22-1, Homobiotin 3376-83-8, **Biotin** sulfoxide 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7, Diaminobiotin 40720-05-6, **Biotin** sulfone

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

IT 58-85-5D, **Biotin**, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (radiolabeled; prepn. of **biotin** derivs. for conditioning of extracorporeal device and extn. of toxic material from mammalian body fluids)

=> d 115 8-15 all

L15 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2003 ACS
 AN 2001:201927 CAPLUS
 TI Synthesis and evaluation of protein biotinylation reagents that also contain UV and/or fluorescence absorbing moieties
 AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E. B.
 CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA
 SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031
 CODEN: ACSRAL; ISSN: 0065-7727
 PB American Chemical Society
 DT Journal; Meeting Abstract
 LA English
 AB Two new biotinylation reagents have been prepd. The reagents are trifunctional in that they contain a **biotin** moiety, a fluorescein or cyanocobalamin moiety, and an amine reactive functionality, Ph isothiocyanate. The **biotin** moiety is stabilized from biotinidase cleavage by coupling with an aspartate moiety, and the **biotin**-aspartate is sepd. from the phenylisothiocyanate moiety by a linker mol., 4,7,10-trioxa-1,13-tridecanediamine. The UV and fluorescent absorbing moieties are also linked to the phenylisothiocyanate via the a trioxatridecanediamine moiety. The new biotinylation reagents were prepd. primarily for use when the amt. of protein being biotinylated is limited. Quantification of the no. of **biotin** moieties per

protein mol. is difficult using the std. HABA dye method when small (i.e .mu.g quantities) of protein are used. A comparison of the quantification of nos. of **biotin** moieties/protein obtained via the HABA method and those obtained by direct measurement from absorption in UV and fluorescence will be provided.

L15 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 2000:145059 CAPLUS

DN 132:191408

TI Rapid quantitative analysis of proteins or protein function in complex mixtures using affinity labeling reagents and mass spectrometry

IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C. Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate

PA University of Washington, USA

SO PCT Int. Appl., 116 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C12Q001-00

ICS G01N033-573; G01N033-53; G01N033-567; G01N024-00

CC 9-5 (Biochemical Methods)

Section cross-reference(s): 6, 7, 26

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
	W: AU, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408

AB Anal. reagents and mass spectrometry-based methods using these reagents for the rapid, and quant. anal. of proteins or protein function in mixts. of proteins are disclosed. The methods employ affinity labeled protein reactive reagents having three portions: an affinity label (A) covalently linked to a protein reactive group (PRG) through a linker group (L). The linker may be differentially isotopically labeled, e.g., by substitution of one or more atoms in the linker with a stable isotope thereof. These reagents allow for the selective isolation of peptide fragments or the products of reaction with a given protein (e.g., products of enzymic reaction) from complex mixts. The isolated peptide fragments or reaction products are characteristic of the presence of a protein or the presence of a protein function in those mixts. Isolated peptides or reaction products are characterized by mass spectrometric (MS) techniques. The reagents also provide for differential isotopic labeling of the isolated peptides or reaction products which facilitates quant. detn. by mass spectrometry of the relative amt. of proteins in different samples. The methods of this invention can be used for qual. and quant. anal. of global protein expression profiles in cells and tissues, to screen for and identify proteins whose expression level in cells, tissue or biol. fluids is affected by a stimulus or by a change in condition or cell state of the cell, tissue or organism from which the sample originated. A conjugate of

N-methylglycylbiotinamide acid and the Michael addn. product of 4,7,10-trioxa-1,13-**tridecanediamine** and p-acrylamidophenyl-.beta.-D-galactopyranoside was prepd. for detecting .beta.-D-galactosidase deficiency and GM1-gangliosidosis.

- ST protein affinity labeling reagent mass spectrometry; isotope labeling reagent protein mass spectrometry; function protein analysis; enzyme substrate affinity isotope label reagent; **biotin** conjugate reagent galactosidase GM1 gangliosidosis
- IT Glycols, biological studies
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(1,2-, conjugates with labeled protein-reactive reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Gangliosidosis
(GM1 gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Mucopolysaccharidosis
(Sanfilippo's syndrome, type B or D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Enzymes, analysis
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(affinity labeling reagents contg. substrates for; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Amino group
Sulfhydryl group
(affinity labeling reagents reactive with, of proteins; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Carboxylic acids, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(affinity labeling reagents reactive with, of proteins; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Peptides, analysis
RL: ANT (Analyte); FMU (Formation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
(affinity-tagged, tagged proteins converted to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Protein sequence analysis
(by tandem mass spectrometry; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Haptens
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates, with labeled protein-reactive reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Tandem mass spectrometry
Tandem mass spectrometry
(electrospray-ionization; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)
- IT Congenital malformations

Lysosomal storage disease
 (enzyme deficiency assocd. with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Fibroblast
 (enzyme reagent response to, of patients with and without .beta.-galactosidase deficiency; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Disease, animal
 (enzyme-deficiency; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Avidins
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (immobilized, affinity column; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Disulfide group
 (linker contg., in labeling reagents; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Mass spectrometry
 Mass spectrometry
 (liq. chromatog. combined with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Liquid chromatography
 Liquid chromatography
 (mass spectrometry combined with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Proteins, specific or class
 RL: ANT (Analyte); ANST (Analytical study)
 (membrane; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Stress, animal
 (phys., proteins expressed in response to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Saccharomyces cerevisiae
 (protein expression in, with galactose or ethanol as carbon source; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Isotopes
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (protein-reactive affinity reagent labeled with; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Environment
 Nutrition, animal
 (proteins expressed in response to different conditions in; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Chemicals
 (proteins expressed in response to different; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Organelle
 (proteins of; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT Chromatography

Functional groups
Mass spectrometry
Tandem mass spectrometry
Test kits
(rapid quant. anal. of proteins or protein function in complex mixts.
using affinity labeling reagents and mass spectrometry)

IT Proteins, general, analysis
RL: AMX (Analytical matrix); ANT (Analyte); PRP (Properties); ANST
(Analytical study)
(rapid quant. anal. of proteins or protein function in complex mixts.
using affinity labeling reagents and mass spectrometry)

IT Ovalbumin
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant
or reagent)
(rapid quant. anal. of proteins or protein function in complex mixts.
using affinity labeling reagents and mass spectrometry)

IT Reagents
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical
study); BIOL (Biological study); USES (Uses)
(rapid quant. anal. of proteins or protein function in complex mixts.
using affinity labeling reagents and mass spectrometry)

IT Cell
(subcellular fractions of, proteins of; rapid quant. anal. of proteins
or protein function in complex mixts. using affinity labeling reagents
and mass spectrometry)

IT Electrospray ionization mass spectrometry
Electrospray ionization mass spectrometry
(tandem; rapid quant. anal. of proteins or protein function in complex
mixts. using affinity labeling reagents and mass spectrometry)

IT Lactalbumins
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant
or reagent)
(.alpha.-; rapid quant. anal. of proteins or protein function in
complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9031-11-2, .beta.-Galactosidase 9032-94-4 37288-40-7 37289-41-1,
Heparin sulfamidase 60320-99-2, N-Acetylglucosamine-6-sulfatase
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse);
BSU (Biological study, unclassified); THU (Therapeutic use); ANST
(Analytical study); BIOL (Biological study); USES (Uses)
(affinity labeling reagents contg. substrates for; rapid quant. anal.
of proteins or protein function in complex mixts. using affinity
labeling reagents and mass spectrometry)

IT 1192-20-7, Homoserine lactone
RL: RCT (Reactant); RACT (Reactant or reagent)
(affinity labeling reagents reactive with, of proteins; rapid quant.
anal. of proteins or protein function in complex mixts. using affinity
labeling reagents and mass spectrometry)

IT 221565-10-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(as GM1 internal std.; rapid quant. anal. of proteins or protein
function in complex mixts. using affinity labeling reagents and mass
spectrometry)

IT 259874-59-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(as deuterated analog; rapid quant. anal. of proteins or protein
function in complex mixts. using affinity labeling reagents and mass
spectrometry)

IT 259874-28-7P 259874-29-8P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use);
BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent);
USES (Uses)

(as enzyme substrate reagent; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-11-3P 259874-61-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (as internal std.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-31-2 259874-32-3
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (as labeled internal std.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-07-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (as reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-55-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (as reagent for diagnosing Sanfilippo syndrome type D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 252730-69-1 252730-69-1D, deuterium-labeled
 RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
 (as reagent; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-30-1
 RL: ANT (Analyte); FMU (Formation, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses)
 (enzyme reagent cleavage to; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 58-85-5 107-13-1, 2-Propenenitrile, reactions 111-46-6, reactions 407-25-0, Trifluoroacetic anhydride 769-39-1, 2,3,5,6-Tetrafluorophenol 13515-93-0, N-Methylglycine methyl ester hydrochloride 182267-11-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 22397-31-5P 24997-19-1P 53807-26-4P, 2-Propenenitrile-2,3,3-d3 112935-57-6P 142685-25-4P, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 154024-76-7P 173341-32-7P 194920-70-2P 259874-33-4P 259874-35-6P 259874-36-7P 259874-38-9P 259874-39-0P 259874-40-3P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 221565-06-6P 259874-34-5P 259874-37-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (in prepn. of reagent for diagnosing GM1-gangliosidosis; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 814-68-6, Acryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 3386-87-6P 14419-59-1P 135253-87-1P 259874-41-4P 259874-42-5P

259874-43-6P 259874-47-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-45-8P

RL: SPN (Synthetic preparation); PREP (Preparation)

(in prepn. of reagent for diagnosing Sanfilippo syndrome type B; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-51-6P 259874-53-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in prepn. of reagent for diagnosing Sanfilippo syndrome type D; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 693-57-2 1670-26-4, Sphingosylphosphorylcholine 2238-90-6, Psychosine
2997-01-5 4246-51-9 259874-25-4 259874-26-5 259874-27-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 183896-00-6P 259874-63-0P 259874-66-3P 259874-74-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-68-5P 259874-70-9P 259874-76-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(in reagent prepn.; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 59-23-4, Galactose, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(protein expression in *Saccharomyces cerevisiae* grown in ethanol or; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 50-99-7, Glucose, miscellaneous

RL: MSC (Miscellaneous)

(protein expression in *Saccharomyces cerevisiae* grown in galactose or ethanol instead of; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 64-17-5, Ethanol, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)

(protein expression in *Saccharomyces cerevisiae* grown in galactose or; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9001-50-7, Glyceraldehyde-3-phosphate dehydrogenase

RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)

(rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9013-20-1D, Streptavidin, agarose-immobilized

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(rapid quant. anal. of proteins or protein function in complex mixts.)

using affinity labeling reagents and mass spectrometry)

IT 58-85-5D, **Biotin**, conjugates with labeled protein-reactive reagents 69-79-4D, Maltose, conjugates with labeled protein-reactive reagents 70-18-8D, Glutathione, conjugates with labeled protein-reactive reagents 71-00-1D, Histidine, oligo-, conjugates with labeled protein-reactive reagents, biological studies 139-13-9D, Nitritotriacetic acid, conjugates with labeled protein-reactive reagents
 RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
 (rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9001-92-7, Proteolytic enzyme
 RL: ARU (Analytical role, unclassified); CAT (Catalyst use); ANST (Analytical study); USES (Uses)
 (rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 259874-57-2
 RL: MSC (Miscellaneous)
 (rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

IT 9012-36-6, Agarose
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (streptavidin immobilized on; rapid quant. anal. of proteins or protein function in complex mixts. using affinity labeling reagents and mass spectrometry)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Adamczyk; US 5851781 A 1998 CAPLUS
- (2) Berninger; US 5880270 A 1999 CAPLUS
- (3) Dower; US 5958703 A 1999 CAPLUS
- (4) Ghazarossian; US 5614368 A 1997 CAPLUS
- (5) Griffiths; US 5965131 A 1999 CAPLUS
- (6) Kientsch-Engel; US 5863740 A 1999 CAPLUS
- (7) Magnani; US 5965457 A 1999 CAPLUS
- (8) Markert-Hahn; US 5514559 A 1996 CAPLUS
- (9) Schlieper; US 5658725 A 1997 CAPLUS
- (10) Shoseyov; US 5738984 A 1998 CAPLUS
- (11) Sigler; US 4798795 A 1989 CAPLUS
- (12) Tom-Moy; US 5527711 A 1996 CAPLUS
- (13) Vreeke; US 5534132 A 1996 CAPLUS

L15 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1999:255414 CAPLUS

DN 131:70769

TI Site-Specific Modification of a Single-Chain Antibody Using a Novel Glyoxylyl-Based Labeling Reagent

AU Zhao, Zhan G.; Im, Jin S.; Lam, Kit S.; Lake, Douglas F.

CS Arizona Cancer Center, Tucson, AZ, 85724, USA

SO Bioconjugate Chemistry (1999), 10(3), 424-430

CODEN: BCCHE5; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 9-14 (Biochemical Methods)

Section cross-reference(s): 2, 3, 15

AB A novel, highly specific protein modification approach is described. By using conventional mol. cloning techniques, a protein can be constructed and expressed such that the N-terminal residue is replaced by cysteine. Its 1,2-aminothiol structure reacts very specifically with a glyoxylyl group at pH 7 or below, forming a relatively stable thiazolidine bridge. Therefore, a glyoxylyl-based labeling agent (e.g., radioactive tags, fluorescent probes, **biotin**) can be used to specifically modify a

protein at its N-terminus. To highlight this novel approach, a recombinant anti-insulin single chain antibody (scFv) was specifically biotinylated at its N-terminus even in the presence of other proteins in the total cell lysate. The glyoxylyl-biotinylated scFv retained binding activity similar to unmodified scFv.

- ST antibody labeling glyoxylyl **biotin** reagent; single chain antibody cloning glyoxylyl labeling
- IT Molecular cloning
(of scFv, putting cysteine residue at N-terminus; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT Escherichia coli
(recombinant scFv expression in; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT Antibodies
RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(single chain; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 52-90-4, Cysteine, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(at N-terminus of scFv, mol. cloning in prepn. of and labeling reagent reactive with; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 58-85-5, **Biotin** 108-30-5, Succinic anhydride, reactions 4246-51-9, 4,7,10-Trioxa-1,13-**tridecanediamine** 82911-69-1, Fmoc-OSu
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 172089-14-4P 228851-40-9DP, resin-bound 228851-41-0DP, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 228851-42-1DP, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and cleavage of, in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 228851-43-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of, in prepn. of glyoxylyl reagent; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)
- IT 9004-10-8, Insulin, analysis
RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(recombinant glyoxylyl-**biotin**-labeled scFv response to; site-specific modification of single-chain antibody using novel glyoxylyl-based labeling reagent)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Alouni, S; Eur J Biochem 1995, V227, P328

(2) Atherton, E; Solid-Phase Peptide Synthesis A practical Approach 1989

- (3) Ausubel, F; Current protocols in Molecular Biology 1989
- (4) Ben-Bassat, A; J Bacteriol 1987, V169, P751 CAPLUS
- (5) Brinkley, M; Perspectives in Bioconjugate Chemistry 1993, P59
- (6) Disantos, C; Endocrinol 1988, V123, P1483
- (7) Gaertner, H; Bioconjugate Chem 1992, V3, P262 CAPLUS
- (8) Gaertner, H; Bioconjugate Chem 1996, V7, P38 CAPLUS
- (9) Geoghegan, K; Bioconjugate Chem 1992, V3, P138 CAPLUS
- (10) Hirel, P; Proc Natl Acad Sci U S A 1989, V86, P8247 CAPLUS
- (11) Lake, D; Mol Immunol 1994, V31, P845 CAPLUS
- (12) Loffex, A; Innovative and Perspectives in Solid-Phase Synthesis 1992, P77
- (13) Meares, C; Perspectives in Bioconjugate Chemistry 1993, P1
- (14) Meinnel, T; J Bacteriol 1995, V177, P1883 CAPLUS
- (15) Rose, K; Bioconjugate Chem 1991, V2, P154 CAPLUS
- (16) Rose, K; Bioconjugate Chem 1996, V7, P552 CAPLUS
- (17) Sanger, F; Proc Natl Acad Sci U S A 1977, V74, P5463 CAPLUS
- (18) Smith, M; J Biol Chem 1988, V263, P7211 CAPLUS
- (19) Smyth, D; Biochem J 1964, V91, P589 CAPLUS
- (20) Wetzel, R; Bioconjugate Chem 1990, V1, P114 CAPLUS
- (21) Wingfield, P; Eur J Biochem 1989, V179, P565 CAPLUS
- (22) Zhang, L; Anal Biochem 1996, V233, P87 CAPLUS
- (23) Zhao, Z; J Chem Soc Chem Commun 1995, P1739 CAPLUS

L15 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1997:708440 CAPLUS

DN 127:298612

TI **Biotin** Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro Evaluation of **Biotin** Dimers and Trimers for Crosslinking of Streptavidin

AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(6), 819-832
CODEN: BCCHES; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 26

AB Polymn. and/or crosslinking of recombinant streptavidin (r-SAv) with **biotin** derivs. contg. two **biotin** moieties (**biotin** dimers) or three **biotin** moieties (**biotin** trimers) has been investigated as a model for reagents to be used to increase the amt. of radioactivity on cancer cells in tumor pretargeting protocols. In the investigation, six **biotin** dimers and three **biotin** trimers were synthesized. Most **biotin** derivs. synthesized had ether contg. linker mols. incorporated to improve their aq. soly. The synthesized **biotin** dimers contained linker moieties which provided distances (when fully extended) of 13-49 .ANG. between **biotin** carboxylate carbon atoms, and the **biotin** trimers contained linker moieties which provided distances of 31-53 .ANG. between any two **biotin** carboxylate atoms. All of the **biotin** derivs. were evaluated for their ability to polymerize r-SAv in soln. When the **biotin** derivs. were mixed with r-SAv, none of the **biotin** dimers caused polymn., but all of the **biotin** trimers resulted in complete polymn. Some of the **biotin** dimers did cross-link r-SAv (to form r-SAv dimers, trimers, etc.), but the percentage of crosslinking was low (.ltoreq.40%). The length of the linker mol. was important in crosslinking of **biotin** dimers. While linkers which provided distances of 13 and 19 .ANG. between **biotin** carboxylate carbon atoms did not result in crosslinking, a linker which provided a 17 .ANG. distance resulted in a small

(.ltoreq.10%) amt. of crosslinking. Also, crosslinking was increased in **biotin** dimers with linkers which provided distances between **biotin** carboxylate carbon atoms of .gtoreq.23 .ANG.. Crosslinking of streptavidin bound in polystyrene wells with **biotin** dimers and trimers was also examd. In those expts., an excess of each **biotin** deriv. was incubated at 37 .degree.C for 10-30 min in polystyrene wells contg. bound SAV. After the excess **biotin** deriv. was rinsed from the wells, an excess of r-[125I]SAv was incubated for another 10-30 min. The amt. of r-[125I]SAv bound after rinsing the excess from the wells was an indicator of the extent of crosslinking that occurred. The process of alternating addns. of reagents was repeated four times to demonstrate that bound radioactivity could be increased with each addn. of [125I]SAv. The results of crosslinking r-SAV in polystyrene wells paralleled results from crosslinking in soln.

ST **biotin** oligomer prepn crosslinking streptavidin
IT Crosslinking agents
Immobilization, biochemical
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)
IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)
IT 58-85-5, **Biotin** 535-87-5, 3,5-Diaminobenzoic acid 929-59-9, 3,6-Dioxa-1,8-octanediamine 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 4422-95-1, 1,3,5-Benzenetricarbonyl trichloride 13887-98-4, 3,6,9-Trioxaundecanedioic acid 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)
IT 138529-46-1P 173341-32-7P 183896-00-6P 190250-18-1P 194920-45-1P
194920-46-2P 194920-54-2P 194920-55-3P 194920-56-4P 194920-58-6P
194920-64-4P 195152-91-1P 195152-92-2P 195152-94-4P 195152-96-6P
195152-98-8P 195152-99-9P 195153-00-5P 195370-62-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and in vitro evaluation of **biotin** dimers and trimers for crosslinking of streptavidin)

L15 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1997:542454 CAPLUS

DN 127:220519

TI Preparation of **biotin** containing compounds with water soluble linker moieties for use as radionuclides and streptavidin crosslinking agents

IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin, Donald K.

PA Board of Regents of the University of Washington, USA

SO PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07H015-00

ICS C12P013-18; C07D235-02; A01N043-52; A61K051-00

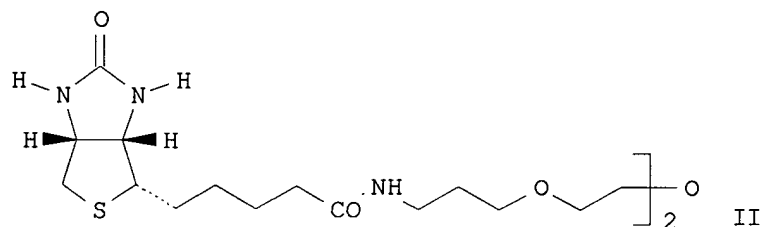
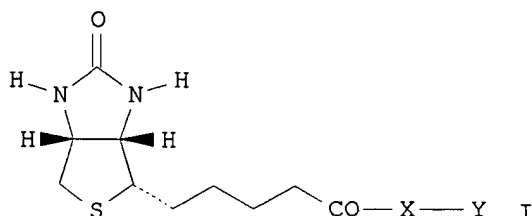
CC 26-9 (Biomolecules and Their Synthetic Analogs)

Section cross-reference(s): 1, 7, 8, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207

	AU 9720524	A1	19970828	AU 1997-20524	19970207
PRAI	US 1996-11321P	P	19960208		
	WO 1997-US2560	W	19970207		
GI					



AB Water sol. **biotin** contg. compds. and biotinylation reagents I {X = divalent water sol. linker such as NH(CH₂)₃O(CH₂)₂O(CH₂)₂ONH, trivalent water sol. linker such as 1,3,5-C₆H₃[CONH(CH₂)₃O(CH₂)₂O(CH₂)₂O(CH₂)₃NH]₃; Y = reactive moiety such as 4-Bu₃Sn-C₆H₄-CO; targeting, diagnostic, or therapeutic moiety such as 4-¹²⁵I-C₆H₄-CO, **biotin**, or cyano-e-cobalamin} were prepd. for use as biotinylation reagents, biotinidase inhibitors (no data), and streptavidin cross linking agents. Thus, **biotin** dimer II was prepd. starting from **biotin** and 4,7,10-trioxa-1,13-tridecanediamine and was tested for streptavidin cross linking.

ST **biotin** compds prepn water soluble; biotinidase inhibitor water soluble **biotin** compd; streptavidin cross linking soluble **biotin** compd; biotinylation reagent soluble **biotin** compd; radionuclides water soluble **biotin** compd

IT Biotinylation
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT Radionuclides, preparation
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 194920-54-2P 194920-55-3P 194920-56-4P 194920-58-6P 194920-60-0P 194920-61-1P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 9013-20-1, Streptavidin 9025-15-4, Biotinidase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 58-85-5, **Biotin** 605-65-2, Dansyl chloride 929-59-9

1711-02-0, 4-Iodobenzoyl chloride 4246-51-9 4422-95-1,
1,3,5-Benzenetricarbonyl trichloride 4480-83-5, Diglycolic anhydride
13515-93-0, N-Methylglycine methyl ester hydrochloride 26264-28-8
55750-48-6, N-Methoxycarbonylmaleimide 142685-25-4, 2,3,5,6-
Tetrafluorophenyl trifluoroacetate 172616-80-7 192720-54-0
194920-72-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 153086-78-3P 154024-76-7P 173341-32-7P 175885-18-4P 183896-00-6P

188014-60-0P 192720-55-1P 192720-56-2P 194920-44-0P 194920-57-5P

194920-62-2P 194920-63-3P 194920-64-4P 194920-65-5P 194920-66-6P

194920-68-8P 194920-69-9P 194920-70-2P 194920-71-3P 194920-73-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 183896-02-8P 194920-43-9P 194920-59-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

IT 189887-14-7P 194920-45-1P 194920-46-2P 194920-47-3P 194920-48-4P

194920-50-8P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of **biotin** contg. compds. with water sol. linker moieties for use as biotinylation reagents, radionuclides, biotinidase inhibitors, and streptavidin crosslinking agents)

L15 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1997:433652 CAPLUS

DN 127:121587

TI **Biotin** reagents for antibody pretargeting. Synthesis, radioiodination and in vitro evaluation of water soluble, biotinidase resistant **biotin** derivatives

AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (1997), 8(4), 572-584
CODEN: BCCHE; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 26-8 (Biomolecules and Their Synthetic Analogs)

Section cross-reference(s): 1, 15, 63

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

- AB An investigation was conducted to examine the stability of water solubilized, radioiodinated **biotin** derivs. toward biotinidase degrdn. in mouse and human serum as development of antibody pretargeting for cancer therapy. Eight new **biotin** derivs. were synthesized to conduct the study. The **biotin** derivs. synthesized contained (1) the **biotin** moiety, (2) a water solubilizing linker moiety, (3) p-iodobenzoate or p-tributylstannylbenzoate moieties, and (4) in some compds., N-Me or .alpha.-Me contg. moieties were added to block biotinidase activity. The linker moiety, 4,7,10-trioxa-1,13-tridecanediamine was included in the **biotin** derivs. to improve their water soly., and functioned as a 17 .ANG. spacer between the **biotin** and benzoyl moieties. Four of the new p-tributylstannylbenzoyl **biotin** derivs. I (R = H, Me; X = SnBu3), II (X = SnBu3), III (X = SnBu3) could be radioiodinated in the last synthetic step. The other four p-iodobenzoyl **biotin** derivs. I (R = H, Me; X = I), II (X = I), III (X = I) were used as HPLC ref. stds. Initial studies involved radioiodination of I (R = H; X = SnBu3) to yield [125I]-I (R = H; X = 125I). Radioiodinated I (R = H; X = I), did not contain a moiety for blocking biotinidase activity and was found to be rapidly degraded in both mouse and human serum at 37 .degree.C. Derivs. designed to be stable to biotinidase incorporated N-Me and .alpha.-Me moieties adjacent to the **biotin** carboxylate group. Linkers in the **biotin** derivs. were 4,7,10-trioxa-1,13-tridecanediamine, its N,N-di-Me analog or sarcosine (N-methylglycine). The radioiodinated N-Me contg. **biotin** derivs. I (R = Me; X = 125I) and II (X = 125I) were very stable to biotinidase degrdn. The radioiodinated .alpha.-Me contg. deriv., III (X = 125I), has an intermediate stability with regards to biotinidase degrdn.
- ST radioiodinated **biotin** analog prepn stability; water soluble **biotin** analog prepn stability; biotinidase resistant **biotin** analog prepn; sarcosine benzoyltrioxadamine **biotin** analog prepn
- IT Antibodies
RL: PNU (Preparation, unclassified); PREP (Preparation) (conjugates; prepn. of stable **biotin** analogs for antibody targeting)
- IT Antitumor agents
(prepn. of stable **biotin** analogs for antibody targeting)
- IT 192720-95-9P 192720-97-1P 192720-99-3P 192721-01-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)
- IT 9025-15-4, Biotinidase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)
- IT 541-48-0, 3-Aminobutyric acid 619-58-9, 4-Iodobenzoic acid 769-39-1, 2,3,5,6-Tetrafluorophenol 4246-51-9 13515-93-0, N-Methylglycine methyl ester hydrochloride 192720-58-4 192720-61-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis, radioiodination and in vitro evaluation of water sol., biotinidase resistant **biotin** derivs.)
- IT 95708-93-3P 110345-46-5P 192720-53-9P 192720-54-0P 192720-55-1P

192720-56-2P 192720-63-1P 192720-64-2P 192720-67-5P 192720-72-2P
192720-74-4P 192720-76-6P 192720-78-8P 192720-81-3P 192720-83-5P
192720-85-7P 192720-86-8P 192720-93-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(synthesis, radioiodination and in vitro evaluation of water sol.,
biotinidase resistant **biotin** derivs.)

IT 192720-66-4P 192720-70-0P 192720-88-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(synthesis, radioiodination and in vitro evaluation of water sol.,
biotinidase resistant **biotin** derivs.)

L15 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS

AN 1996:664622 CAPLUS

DN 126:3868

TI Antibody Fragments in Tumor Pretargeting. Evaluation of Biotinylated Fab'
Colocalization with Recombinant Streptavidin and Avidin

AU Wilbur, D. Scott; Hamlin, Donald K.; Vessella, Robert L.; Stray, James E.;
Buhler, Kent R.; Stayton, Patrick S.; Klumb, Lisa A.; Pathare, Pradip M.;
Weerawarna, S. Ananda

CS Department of Radiation Oncology, University of Washington, Seattle, WA,
98195, USA

SO Bioconjugate Chemistry (1996), 7(6), 689-702
CODEN: BCCHE\$; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 8-9 (Radiation Biochemistry)

Section cross-reference(s): 14

AB An evaluation of the use of a biotinylated monoclonal antibody Fab'
fragment in tumor pretargeting was conducted. As a model system, tumor
colocalization of avidin or recombinant streptavidin (r-streptavidin) and
the biotinylated Fab' fragment (Fab'-S-**biotin**) of A6H, an
antirenal cell carcinoma antibody, was evaluated in athymic mice bearing
human renal cell carcinoma xenografts. A new water sol. sulfhydryl
reactive biotinylation reagent, N-(13-N-maleimido-4,7,10-
trioxatridecanyl)biotinamide, was synthesized and used for biotinylation
of Fab'. A biodistribution of ChT-labeled A6H Fab'-S-**biotin** was
conducted. Data from that distribution indicated that the Fab'-S-
biotin localized well (i.e. 28% ID/g at 24 h) to human tumor
xenografts in athymic mice. Subsequently, a biodistribution study
involving pretargeting radioiodinated A6H Fab'-S-**biotin** to tumor
xenografts, followed by administration of r-streptavidin at 4 or 20 h, was
conducted. Specific colocalization of r-streptavidin to tumors contg. the
A6H Fab'-S-**biotin** was evident from the data obtained. In a
similar biodistribution study, specific colocalization of avidin to tumors
pretargeted with A6H Fab'-S-**biotin** was also obsd. The avidin
used in the study was radioiodinated with the N-hydroxysuccinimidyl ester
of p-[125I]iodobenzoate ([125I]PIB-NHS). Very low concns. (e.g. 0.35%
ID/g) of avidin colocalized at the tumor. To further show that specific
colocalization within the tumor xenografts had occurred with biotinylated
A6H Fab', radioiodinated avidin and r-streptavidin were co-injected into
athymic mice bearing tumor xenografts to obtain their distributions
without having biotinylated Fab' present. At 20 h postinjection, only
small differences in the blood and tumor concns. of either protein were
obsd., indicating that the specific tumor colocalization seen in the
previous two biodistributions must have been due to the presence of
Fab'-S-**biotin**. Calcns. were conducted to est. how much
r-streptavidin (as a molar ratio) was colocalized. From the data obtained
it was estd. that 36-61% of the tumor-localized Fab'-S-**biotin**
mols. were bound with r-streptavidin and 4-23% bound with avidin, under
the conditions studied.

ST tumor pretargeting biotinylated monoclonal antibody
IT Antibodies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(monoclonal, Fab', biotinylated; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Avidins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT Kidney, neoplasm
(renal cell carcinoma; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 173341-32-7P 183896-00-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 4246-51-9, 4,7,10-Trioxa-1,13-**tridecanediamine** 55750-48-6,
N-Methoxycarbonylmaleimide 142685-25-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 9013-20-1, Streptavidin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 58-85-5, **Biotin**
RL: RCT (Reactant); RACT (Reactant or reagent)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

IT 183896-02-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(renal cell carcinoma pretargeting using biotinylated Fab' monoclonal antibody with recombinant streptavidin and avidin)

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6

L8 10 S L5 AND L7

L9 7 S L7 NOT L5

L10 71 S TRIDECANEDIAMINE
 L11 6520 S AVIDIN
 L12 3 S L10 AND L11
 L13 15 S L10 AND L4
 L14 12 S L13 NOT L5
 L15 14 S L13 NOT L7
 L16 2 S L15 NOT L14

=> e extracorporeal

E1 1 EXTRACORPORALLY/BI
 E2 2 EXTRACORPOREA/BI
 E3 5268 --> EXTRACORPOREAL/BI
 E4 133 EXTRACORPOREALLY/BI
 E5 1 EXTRACORPOREALS/BI
 E6 1 EXTRACORPORED/BI
 E7 1 EXTRACORPOREL/BI
 E8 1 EXTRACORPOREOL/BI
 E9 1 EXTRACORPREAL/BI
 E10 25 EXTRACORPUSCULAR/BI
 E11 26 EXTRACORTICAL/BI
 E12 1 EXTRACOTYLEDONARY/BI

=> s e3-e11

5268 EXTRACORPOREAL/BI
 133 EXTRACORPOREALLY/BI
 1 EXTRACORPOREALS/BI
 1 EXTRACORPORED/BI
 1 EXTRACORPOREL/BI
 1 EXTRACORPOREOL/BI
 1 EXTRACORPREAL/BI
 25 EXTRACORPUSCULAR/BI
 26 EXTRACORTICAL/BI
 L17 5404 (EXTRACORPOREAL/BI OR EXTRACORPOREALLY/BI OR EXTRACORPOREALS/BI
 OR EXTRACORPORED/BI OR EXTRACORPOREL/BI OR EXTRACORPOREOL/BI OR
 EXTRACORPREAL/BI OR EXTRACORPUSCULAR/BI OR EXTRACORTICAL/BI)

=> s l17 and l3

L18 4 L17 AND L3

=> d l18 1-4 all

L18 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2002:523951 CAPLUS

DN 137:228855

TI Trifunctional conjugation reagents. Reagents that contain a biotin and a
 radiometal chelation moiety for application to **extracorporeal**
 affinity adsorption of radiolabeled antibodies

AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.;
 Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin

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SO Bioconjugate Chemistry (2002), 13(5), 1079-1092

CODEN: BCCHE5; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

CC 9-14 (Biochemical Methods)

Section cross-reference(s): 8, 15, 63

AB A method of removing radiolabeled monoclonal antibodies (mAbs) from blood
 using a device external to the body, termed **extracorporeal**
 affinity-adsorption (EAA), is being evaluated as a means of decreasing
 irradiation of noncancerous tissues in therapy protocols. The EAA device uses

an avidin column to capture biotinylated-radiolabeled mAbs from circulated blood. In this investigation, three trifunctional reagents have been developed to minimize the potential deleterious effect on antigen binding brought about by the combination of radiolabeling and biotinylation of mAbs required in the EAA approach. The studies focused on radiolabeling with ¹¹¹In and ⁹⁰Y, so the chelates CHX-A''-DTPA and DOTA, which form stable attachments to these radionuclides, were incorporated in the trifunctional reagents. The first trifunctional reagent prep'd. did not incorporate a group to block the biotin cleaving enzyme biotinidase, but the two subsequent reagents coupled aspartic acid to the biotin carboxylate for that purpose. All three reagents used 4,7,10-trioxa-1,13-tridecanediamine as water-sol. spacers between an aminoisophthalate core and the biotin or chelation group. The mAb conjugates were radioiodinated to evaluate cell binding as a function of substitution. Radioiodination was used so that a direct comparison with unmodified mAb could be made. Evaluation of the no. of conjugates per antibody vs. cell binding immunoreactivities indicated that minimizing the no. of conjugates was best. Interestingly, a decrease of radioiodination yield as a function of the no. of isothiocyanate contg. conjugates per mAb was noted. The decreased yields were presumably due to the presence of thiourea functionality formed in the conjugation reaction. Radiolabeling with ¹¹¹In and ⁹⁰Y was facile at room temp. for conjugates contg. the CHX-A'', but elevated temp. (e.g., 45.degree.) was required to obtain good yields with the DOTA chelate. Stability of ⁹⁰Y labeled mAb in serum, and when challenged with 10 mM EDTA, was high. However, challenging the ⁹⁰Y labeled mAb with 10 mM DTPA demonstrated high stability for the DOTA contg. conjugate, but low stability for the CHX-A'' contg. conjugate. Thus, the choice between these two chelating moieties might be made on requirements for facile and gentle labeling vs. very high in vivo stability. Application of the trifunctional biotinylation reagents to the blood clearance of labeled antibodies in EAA is under investigation. The new reagents may also be useful for other applications.

ST trifunctional conjugation reagent biotin radiometal chelation

IT Antibodies

RL: BSU (Biological study, unclassified); REM (Removal or disposal); BIOL (Biological study); PROC (Process)

(monoclonal; trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to

extracorporeal affinity adsorption of radiolabeled antibodies)

IT Affinity

Blood analysis

Blood serum

Chelation

(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT Chelates

Radionuclides, analysis

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT 10098-91-6, Yttrium-90, analysis 15750-15-9, Indium-111, analysis

RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies)

IT **99-31-0** 127985-74-4 137174-07-3 178446-63-4 183896-00-6

194920-62-2 295322-53-1 459134-72-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(trifunctional conjugation reagents. reagents that contain biotin and radiometal chelation moiety for application to **extracorporeal**

affinity adsorption of radiolabeled antibodies)

IT 380607-61-4P 459134-70-4P 459134-73-7P 459134-74-8P 459134-75-9P
 459134-76-0P 459409-35-9P 459409-37-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (trifunctional conjugation reagents. reagents that contain biotin and
 radiometal chelation moiety for application to **extracorporeal**
 affinity adsorption of radiolabeled antibodies)

IT 459134-77-1P 459134-78-2P 459409-36-0P 459409-38-2P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (trifunctional conjugation reagents. reagents that contain biotin and
 radiometal chelation moiety for application to **extracorporeal**
 affinity adsorption of radiolabeled antibodies)

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Axworthy, D; Proc Natl Acad Sci U S A 2000, V97, P1802 CAPLUS
- (2) Baker, H; Ann N Y Acad Sci 1985, V447, P129 CAPLUS
- (3) Bayer, E; Immunoassay 1996, P237 CAPLUS
- (4) Bernstein, K; Biochem Biophys Res Commun 1990, V167, P310 CAPLUS
- (5) Bosch, T; Artif Organs 2000, V24, P696 CAPLUS
- (6) Brechbiel, M; J Chem Soc, Perkin Trans 1 1992, P1173 CAPLUS
- (7) Brown, L; Prostate Cancer Prostatic Dis 1998, V1, P208 CAPLUS
- (8) Chauhan, J; Ann N Y Acad Sci 1985, V447, P386 CAPLUS
- (9) Chen, J; Cancer Biother Radiopharm 1996, V11, P217 CAPLUS
- (10) Chen, J; J Nucl Med 1997, V38, P1934 CAPLUS
- (11) Chen, J; Tumor Targeting 1996, V2, P204 CAPLUS
- (12) Chinol, M; Radioimmunotherapy of Cancer 2000, P169
- (13) Deguchi, Y; Bioconjugate Chem 1999, V10, P32 CAPLUS
- (14) Diamandis, E; Clin Chem 1991, V37, P625 CAPLUS
- (15) Gamper, H; Nucleic Acids Res 1993, V21, P145 CAPLUS
- (16) Garkavij, M; Acta Oncol 1996, V35, P309 MEDLINE
- (17) Garkavij, M; Acta Oncol 1996, V35, P309 MEDLINE
- (18) Garkavij, M; Cancer Res 1995, V55, P5874S CAPLUS
- (19) Garkavij, M; Clin Cancer Res 1999, V5, P3059s CAPLUS
- (20) Garkavij, M; Doctoral Dissertation, Lund University 1996
- (21) Garkavij, M; J Nucl Med 1997, V38, P895 MEDLINE
- (22) Garkavij, M; J Nucl Med 1997, V38, P895 MEDLINE
- (23) Goodwin, D; Cancer (Suppl) 1997, V80, P2675 MEDLINE
- (24) Green, N; Adv Prot Chem 1975, V29, P85 CAPLUS
- (25) Green, N; Biochem J 1965, V94, P23
- (26) Hamblett, K; Bioconjugate Chem 2002, V13, P588 CAPLUS
- (27) Hamlin, D; Isotope Production and Applications in the 21st Century 2000,
 P353 CAPLUS
- (28) Hashimoto, M; ChemBio Chem 2001, V2, P52 CAPLUS
- (29) Hymes, J; Methods Enzymol 1997, V279, P422 CAPLUS
- (30) Kairemo, K; Acta Oncol 1996, V35, P343 MEDLINE
- (31) Kobayashi, H; J Nucl Med 1998, V39, P829 CAPLUS
- (32) Larson, S; Encyclopedia of Cancer 1997, P1420
- (33) Lewis, M; Bioconjugate Chem 1994, V5, P565 CAPLUS
- (34) Li, M; Bioconjugate Chem 1993, V4, P275 CAPLUS
- (35) Mirzadeh, S; Bioconjugate Chem 1990, V1, P59 CAPLUS
- (36) Pippin, C; Bioconjugate Chem 1992, V3, P342 CAPLUS
- (37) Pispas, J; Ann Med Exptl Bio Fenniae 1965, V43, P3
- (38) Polli, J; Biochem J 1991, V275, P733 CAPLUS
- (39) Press, O; Blood 2001, V98, P2535 CAPLUS
- (40) Rosebrough, S; Lab Anim Sci 1995, V45, P554 CAPLUS
- (41) Roselli, M; Cancer Biother Radiopharm 1999, V14, P209 CAPLUS
- (42) Rusckowski, M; Nucl Med Biol 1997, V24, P263 CAPLUS
- (43) Schetters, H; Biomol Eng Dec 1999, V16, P73 CAPLUS
- (44) Silver, D; Clin Cancer Res 1997, V3, P81 MEDLINE
- (45) Stigbrand, T; Acta Oncol 1996, V35, P259 MEDLINE

- (46) Stoldt, H; Eur J Cancer 1997, V33, P186 MEDLINE
 (47) Strand, S; Radioimmunotherapy of Cancer 2000, P223
 (48) Tennvall, J; Cancer 1997, V80, P2411 CAPLUS
 (49) Theodore, L; Radioimmunotherapy of Cancer 2000, P195
 (50) Vessella, R; Cancer Res 1985, V45, P6131 CAPLUS
 (51) Vessella, R; NCI Monogr 1987, V3, P159
 (52) Walker, J; Basic Protein and Peptide Protocols 1994, P5 CAPLUS
 (53) White, C; Annu Rev Med 2001, V52, P125 CAPLUS
 (54) Wilbur, D; Abstr Pap-Am Chem Soc 2001, V221
 (55) Wilbur, D; Bioconjugate Chem 1996, V7, P689 CAPLUS
 (56) Wilbur, D; Bioconjugate Chem 1998, V9, P322 CAPLUS
 (57) Wilbur, D; Bioconjugate Chem 2001, V12, P616 CAPLUS
 (58) Wilbur, D; Bioconjugate Chem 2001, V12, P616 CAPLUS
 (59) Wilbur, D; J Labeled Cpd Radiopharm 2001, V44, PS973
 (60) Wilchek, M; Methods Enzymol 1990, V184, P5 CAPLUS
 (61) Wolf, B; Methods Enzymol 1990, V184, P103 CAPLUS
 (62) Zhang, S; Clin Cancer Res 1998, V4, P295 CAPLUS

L18 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2001:923565 CAPLUS

DN 136:42919

TI Biotin derivatives for an **extracorporeal** device

IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune

PA Mitra Medical Technology AB, Swed.; University of Washington

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 26

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	US 2002159994	A1	20021031	US 2001-881213	20010615
	AU 2001074761	A5	20011224	AU 2001-74761	20010618
PRAI	SE 2000-2287	A	20000616		
	US 2000-216625P	P	20000707		
	WO 2001-SE1374	W	20010618		

AB A method for the conditioning of an **extracorporeal** device is described, as well as a method for **extracorporeal** extn. of toxic material from mammalian body fluids in connection with diagnosis or treatment of a mammalian condition or disease. The methods comprise (i) a soln. contg. a reagent comprising biotin moieties, such as natural biotin or its derivs., and a toxin-binding moiety, (ii) linkers and a trifunctional crosslinking moiety, and (iii) an **extracorporeal** device comprising said reagent. For example, a dibiotin compd., 1-isothiocyanato-3,5-bis-(13'-biotinamidyl-4',7',10'-trioxatridecanamidyl)-aminoisophthalate was prepd. and conjugated with a toxin-binding mol., i.e., monoclonal antibody 53-6A2. A dibiotin-toxin-binding conjugate was

used for conditioning of an avidin-agarose column suitable for removal of toxins from blood.

- ST biotin deriv prepn reagent **extracorporeal** toxin extn; body fluid toxin extn **extracorporeal** biotin reagent
- IT Histocompatibility antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(HLA, antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Imaging
(NMR; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)
- IT Intercalation
(agents; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Antibodies
RL: REM (Removal or disposal); PROC (Process)
(anti-blood group; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Blood-group substances
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biotin derivs.-binding coatings; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Immunity
(cells involved in, removal of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Avidins
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with agarose; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Animal cell
(diseased, removal of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(endotoxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Toxins
RL: REM (Removal or disposal); PROC (Process)
(enterotoxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)
- IT Circulation
Extraction
(**extracorporeal**; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Chelating agents
 (for radionuclides; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Immunoglobulins
 RL: REM (Removal or disposal); PROC (Process)
 (fragments; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Antibodies
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (monoclonal, conjugates, with dibiotin compd.; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Antibodies
 RL: REM (Removal or disposal); PROC (Process)
 (monoclonal; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Amino group
 Blood
 Body fluid
 Carboxyl group
 Chemotherapy
 Cytotoxic agents
 Dyes
 Extraction columns
 Hydroxyl group
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Chelates
 Cytokines
 Metals, processes
 Oligodeoxyribonucleotides
 Peptides, processes
 Radionuclides, processes
 Toxins
 Tumor necrosis factors
 RL: REM (Removal or disposal); PROC (Process)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Diagnosis
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Positron-emission tomography
 Scintigraphy
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids in diagnosis and therapy)

IT Transplant and Transplantation
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids prior to transplantation)

IT Bacteria (Eubacteria)
 Virus
 (toxins; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Disease, animal
 (treatment; prepn. of biotin derivs. for conditioning of

extracorporeal device and extn. of toxic material from mammalian body fluids in diagnosis and disease treatment)

IT Reagents
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (tribiotinylated; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Neoplasm
 (uptake, monitoring of; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT Antibodies
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (xenoantibodies, antibodies against; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 9013-20-1, Streptavidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (biotin derivs.-binding coatings; prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 9012-36-6D, Agarose, conjugates with avidin
 RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 58-85-5, Biotin **99-31-0**, 5-Aminoisophthalic acid 4246-51-9, 4,7,10,Trioxa-1,13-tridecanediamine 24424-99-5, Di-tert-butyl dicarbonate 142685-25-4, 2,3,5,6-Tetrafluorophenyl trifluoroacetate 380607-49-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 173341-32-7P 178446-63-4P 183896-00-6P 380607-50-1P 380607-51-2P 380607-56-7P 380607-60-3P 380607-61-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 380607-52-3P 380607-54-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 194920-56-4P 194920-58-6P 380607-48-7P 380607-52-3DP, conjugates with monoclonal antibodies 380607-53-4P 380607-55-6P 380607-57-8P 380607-58-9P 380607-59-0P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 533-48-2, Desthiobiotin 535-87-5, 3,5-Diaminobenzoic acid 554-95-0, 1,3,5-Benzene tricarboxylic acid 669-72-7, Nor-biotin 1784-22-1, Homobiotin 3376-83-8, Biotin sulfoxide 13395-35-2, Iminobiotin 14474-91-0, Oxybiotin 22342-46-7, Diaminobiotin 40720-05-6, Biotin sulfone
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (prepn. of biotin derivs. for conditioning of **extracorporeal** device and extn. of toxic material from mammalian body fluids)

IT 58-85-5D, Biotin, derivs.

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (radiolabeled; prepn. of biotin derivs. for conditioning of
extracorporeal device and extn. of toxic material from
 mammalian body fluids)

L18 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35037 CAPLUS

DN 132:90367

TI Trifunctional reagent for conjugation to a biomolecule for use in
 diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
 Technology AB

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-543

ICS A61K039-00; A61K047-48; A61K051-00; A61K049-00

CC 9-15 (Biochemical Methods)

Section cross-reference(s): 1, 8, 15, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humorous mols. in vivo or ex vivo; and to d) a biomol. reactive

moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. biotin or a biotin deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

- ST trifunctional reagent biomol conjugation diagnosis therapy; biotin trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate
- IT Imaging agents
 - (NMR contrast, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Imaging agents
 - (acoustic imaging contrast agents, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Proteins, specific or class
 - RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Ligands
 - RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 - (affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Functional groups
 - (ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Chromophores
 - Fluorescent substances
 - (as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Separators
 - (blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Amines, biological studies
 - RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 - (cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Lung, disease
 - (embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Carboxylic acids, properties
 - RL: PRP (Properties)
 - (esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)
- IT Adsorption apparatus
 - (**extracorporeal**, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
 (extracorporeal, nontargeted biomol. conjugate removal from;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Affinity chromatographic stationary phases
 (for removal of nontargeted biomol. conjugate from blood circulation;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Imaging
 (gamma-ray; trifunctional reagent for conjugation to a biomol. for use
 in diagnosis and therapy)

IT Vinyl compounds, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (halo, halogen radionuclide-contg., as effector agent in trifunctional
 reagent; trifunctional reagent for conjugation to a biomol. for use in
 diagnosis and therapy)

IT Aryl halides
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (halogen radionuclide-contg., as effector agent in trifunctional
 reagent; trifunctional reagent for conjugation to a biomol. for use in
 diagnosis and therapy)

IT Avidins
 Receptors
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU
 (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immobilized, extracorporeal adsorption device contg., in kit
 for removal of nontargeted biomol. conjugate from blood circulation;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Heart, disease
 (infarction; trifunctional reagent for conjugation to a biomol. for use
 in diagnosis and therapy)

IT Ethers, properties
 Sulfonates
 Thioethers
 RL: PRP (Properties)
 (linkers contg.; trifunctional reagent for conjugation to a biomol. for
 use in diagnosis and therapy)

IT Circulation
 (nontargeted biomol. conjugate removal from; trifunctional reagent for
 conjugation to a biomol. for use in diagnosis and therapy)

IT Radiosensitizers, biological
 (pharmaceutical, trifunctional reagent contg., as effector agent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Materials
 (photoactive chems., as effector agent in trifunctional reagent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT Enzymes, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (prodrug-metabolizing, trifunctional reagent contg., as effector agent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

and therapy)

IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing;
trifunctional reagent for conjugation to a biomol. for use in diagnosis
and therapy)

IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in
diagnosis and therapy)

IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use
in diagnosis and therapy)

IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for
use in diagnosis and therapy)

IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional
reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in;
trifunctional reagent for conjugation to a biomol. for use in diagnosis
and therapy)

IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional
reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU
(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
(Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent;
trifunctional reagent for conjugation to a biomol. for use in diagnosis
and therapy)

IT Immunostimulants
Immunosuppressants
(trifunctional reagent contg., as effector agent; trifunctional reagent
for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Hormones, animal, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU
(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
(Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent
for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Photodynamic therapy
Photoimaging
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in
diagnosis and therapy)

IT Reagents
 RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); RACT (Reactant or
 reagent); USES (Uses)
 (trifunctional reagent for conjugation to a biomol. for use in
 diagnosis and therapy)

IT Crosslinking agents
 (trifunctional; trifunctional reagent for conjugation to a biomol. for
 use in diagnosis and therapy)

IT Thrombosis
 (venous, deep; trifunctional reagent for conjugation to a biomol. for
 use in diagnosis and therapy)

IT Imaging agents
 (x-ray, contrast, trifunctional reagent contg., as effector agent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT 9025-15-4, Biotinidase
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); BIOL (Biological study)
 (biotin-contg. reagent with stability against cleavage with;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D,
 Lutetium, radionuclides, biological studies 7440-19-9D, Samarium,
 radionuclides, biological studies 7440-50-8D, Copper, radionuclides,
 biological studies 7440-65-5D, Yttrium, radionuclides, biological
 studies 7440-69-9D, Bismuth, radionuclides, biological studies
 7440-74-6D, Indium, radionuclides, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (cyclic amines binding to, as effector agent in trifunctional reagent;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111,
 biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for gamma ray
 imaging; trifunctional reagent for conjugation to a biomol. for use in
 diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124,
 biological studies 14809-47-3, Bromine-75, biological studies
 15765-38-5, Bromine-76, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU
 (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
 ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
 (Reactant or reagent); USES (Uses)
 (effector agent contg., in trifunctional reagent, for positron imaging;
 trifunctional reagent for conjugation to a biomol. for use in diagnosis
 and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90,
 biological studies 14265-75-9, Lutetium-177, biological studies
 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212,
 biological studies 14998-63-1, Rhenium-186, biological studies
 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211,
 biological studies 15757-86-5, Copper-67, biological studies
 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157,
 biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized

RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(**extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2

56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, Biotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety **99-31-0D,**

3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety

533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D,

3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene,

conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin,

conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, Biotin sulfoxide, conjugates with

crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to

effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol.

reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking

agent binding to effect agent and to biomol. reactive moiety
40720-05-6D, Biotin sulfone, conjugates with crosslinking agent binding to
effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D,
derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5
254447-31-9

RL: ARG (Analytical reagent use); BPR (Biological process); BSU
(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT
(Reactant or reagent); USES (Uses)

(trifunctional reagent for conjugation to a biomol. for use in
diagnosis and therapy)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
- (2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
- (3) Boehringer Mannheim GmbH; EP 0618192 A1 1994 CAPLUS
- (4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
- (5) Eigo, O; 1997, 20, CAPLUS
- (6) Eigo, O; Cancer Res 1997, V88(2), P205
- (7) Gaetjens, E; US 5134071 A 1992 CAPLUS
- (8) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
- (9) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
- (10) Jacobson, K; US 5310916 A 1994 CAPLUS
- (11) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
- (12) Pharmacia & Upjohn Ab; WO 9904820 A2 1999 CAPLUS
- (13) Tutt, A; The Journal of Immunology 1991, V147(1), P60 CAPLUS

L18 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in
diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Department of Radiation Oncology, University of Washington, USA; Mitra
Medical Technology AB

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N033-543

ICS C07K019-00; A61K039-395; A61K047-48; A61K051-00; A61K049-00

CC 9-15 (Biochemical Methods)

Section cross-reference(s): 1, 8, 15, 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,			

LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD,
 SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU,
 ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9950767 A1 20000124 AU 1999-50767 19990707

EP 1095274 A1 20010502 EP 1999-935251 19990707

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO

JP 2002519440 T2 20020702 JP 2000-558395 19990707

NO 2001000021 A 20010307 NO 2001-21 20010103

PRAI WO 1998-SE1345 A 19980707

WO 1999-SE1241 W 19990707

AB A reagent for conjugation to a biomol. for diagnosis and treatment of human and animal conditions and diseases is described, wherein the reagent is a single mol. with at least three functional parts and a) wherein a trifunctional crosslinking moiety is coupled to b) an affinity ligand via a linker 1, said affinity ligand being capable of binding with another mol. having affinity for said ligand; to c) an effector agent, optionally via a linker 2, said effector agent exerting its effects on cells, tissues and/or humours mols. in vivo or ex vivo; and to d) a biomol. reactive moiety, optionally via a linker 3, said moiety being capable of forming a bond between the reagent and the biomol. The affinity ligand is esp. biotin or a biotin deriv. The effector agent is a toxin, an enzyme capable of converting a prodrug to an active drug, an immunosuppressant, an immunostimulant, or a radionuclide-binding agent, with or without the radionuclide.

ST trifunctional reagent biomol conjugation diagnosis therapy; biotin trifunctional reagent biomol conjugate diagnosis therapy; toxin trifunctional reagent biomol conjugate therapy; prodrug converting enzyme trifunctional reagent conjugate; immunomodulator trifunctional reagent conjugate; radiotherapy trifunctional reagent conjugate; imaging agent trifunctional reagent conjugate

IT Proteins, specific or class
 RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (affinity ligand-binding, for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ligands
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); USES (Uses)
 (affinity, trifunctional reagent contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Functional groups
 (ammonio group, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Separators
 (blood plasma, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Amines, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (cyclic, radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Lung, disease

(embolism; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Carboxylic acids, properties
 RL: PRP (Properties)
 (esters, linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Adsorption apparatus
 (**extracorporeal**, in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
 (**extracorporeal**, nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Affinity chromatographic stationary phases
 (for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Imaging
 (gamma-ray; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Vinyl compounds, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (halo, halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Aryl halides
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (halogen radionuclide-contg., as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
 Receptors
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (immobilized, **extracorporeal** adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Heart, disease
 (infarction; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Ethers, properties
 Sulfonates
 Thioethers
 RL: PRP (Properties)
 (linkers contg.; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Circulation
 (nontargeted biomol. conjugate removal from; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(prodrug-metabolizing, trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Drug delivery systems
(prodrugs, trifunctional reagent contg. enzymes metabolizing; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Brain, disease
(stroke; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radiotherapy
(targeted; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Disease, animal
(treatment of; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Avidins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Body fluid
(trifunctional reagent contg. effector agent acting on mols. in; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal tissue
Cell
(trifunctional reagent contg. effector agent acting on; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Radionuclides, biological studies
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg. moieties binding to, as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Immunostimulants
Immunosuppressants
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Enzymes, biological studies
Toxins
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent contg., as effector agent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Animal
Atherosclerosis
Biochemical molecules
Diagnosis
Drug targeting
Mammal (Mammalia)
Neoplasm
Positron-emission tomography
Therapy
Vertebrate (Vertebrata)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Reagents

RL: ARG (Analytical reagent use); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Crosslinking agents

(trifunctional; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT Thrombosis

(venous, deep; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9025-15-4, Biotinidase

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(biotin-contg. reagent with stability against cleavage with; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 7439-92-1D, Lead, radionuclides, biological studies 7439-94-3D, Lutetium, radionuclides, biological studies 7440-19-9D, Samarium, radionuclides, biological studies 7440-50-8D, Copper, radionuclides, biological studies 7440-65-5D, Yttrium, radionuclides, biological studies 7440-69-9D, Bismuth, radionuclides, biological studies 7440-74-6D, Indium, radionuclides, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(cyclic amines binding to, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 15715-08-9, Iodine-123, biological studies 15750-15-9, Indium-111, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-56-1, Fluorine-18, biological studies 14158-30-6, Iodine-124, biological studies 14809-47-3, Bromine-75, biological studies 15765-38-5, Bromine-76, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(effector agent contg., in trifunctional reagent, for positron imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 14265-75-9, Lutetium-177, biological studies 14378-26-8, Rhenium-188, biological studies 14913-49-6, Bismuth-212, biological studies 14998-63-1, Rhenium-186, biological studies 15623-45-7, Radium-223, biological studies 15755-39-2, Astatine-211, biological studies 15757-86-5, Copper-67, biological studies 15776-20-2, Bismuth-213, biological studies 29687-57-8, Samarium-157, biological studies

RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(effector agent contg., in trifunctional reagent, for radiotherapy;

trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1D, Streptavidin, immobilized
 RL: BUU (Biological use, unclassified); DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (extracorporeal adsorption device contg., in kit for removal of nontargeted biomol. conjugate from blood circulation; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 14133-76-7, Technetium-99, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for gamma ray imaging; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 13981-55-0, Indium-114, biological studies
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (metastable, effector agent contg., in trifunctional reagent, for radiotherapy; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 60-00-4D, EDTA, derivs. 67-43-6D, DTPA, derivs. 3565-84-2
 56491-86-2, NOTA 60239-18-1, DOTA 60239-22-7, TETA 254441-22-0
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
 (radionuclide-binding, as effector agent in trifunctional reagent; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 9013-20-1, Streptavidin
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (trifunctional reagent contg. affinity ligand binding to; trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

IT 58-85-5D, Biotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 99-31-0D,
 3,5-Dicarboxyaniline, conjugates with affinity ligand and effector agent and biomol. reactive moiety 108-72-5D, 1,3,5-Triaminobenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 533-48-2D, Desthiobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 535-87-5D,
 3,5-Diaminobenzoic acid, conjugates with affinity ligand and effector agent and biomol. reactive moiety 554-95-0D, 1,3,5-Tricarboxybenzene, conjugates with affinity ligand and effector agent and biomol. reactive moiety 669-72-7D, Norbiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 1784-22-1D, Homobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 3376-83-8D, Biotin sulfoxide, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 13395-35-2D, Iminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 14474-91-0D, Oxybiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 22342-46-7D, Diaminobiotin, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 40720-05-6D, Biotin sulfone, conjugates with crosslinking agent binding to effect agent and to biomol. reactive moiety 254441-23-1 254441-24-2D, derivs. 254441-25-3 254441-26-4 254441-28-6 254447-29-5
 RL: ARG (Analytical reagent use); BPR (Biological process); BSU

(Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(trifunctional reagent for conjugation to a biomol. for use in diagnosis and therapy)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Beckman Instruments Inc; EP 0310361 A2 1989 CAPLUS
- (2) Board Of Regents Of The University Of Washington; WO 9729114 A1 1997 CAPLUS
- (3) Boehringer Mannheim GmbH; EP 0618192 A1 1994 CAPLUS
- (4) Cancer Research Campaign Technology Limited; WO 8910140 A1 1989 CAPLUS
- (5) Gaetjens, E; US 5134071 A 1992 CAPLUS
- (6) Hybritech Incorporated; WO 9302105 A1 1993 CAPLUS
- (7) Immunomedics Inc; WO 9604313 A1 1996 CAPLUS
- (8) Jacobson, K; US 5310916 A 1994 CAPLUS
- (9) Muzykantov, V; Proc Natl Acad Sci 1996, V93, P5213 CAPLUS
- (10) Otusji, E; 1997, 20, CAPLUS
- (11) Otusji, E; Cancer Res 1997, V88(2), P205 CAPLUS

=> d 118 1-4

L18 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2002:523951 CAPLUS

DN 137:228855

TI Trifunctional conjugation reagents. Reagents that contain a biotin and a radiometal chelation moiety for application to **extracorporeal** affinity adsorption of radiolabeled antibodies

AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Kegley, Brian B.; Nilsson, Rune; Sandberg, Bengt E. B.; Brechbiel, Martin

CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA

SO Bioconjugate Chemistry (2002), 13(5), 1079-1092

CODEN: BCCHE5; ISSN: 1043-1802

PB American Chemical Society

DT Journal

LA English

RE.CNT 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2001:923565 CAPLUS

DN 136:42919

TI Biotin derivatives for an **extracorporeal** device

IN Sandberg, Bengt; Wilbur, Scott; Nilsson, Rune

PA Mitra Medical Technology AB, Swed.; University of Washington

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001095857	A2	20011220	WO 2001-SE1374	20010618
	WO 2001095857	A3	20020328		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, FR, GB, GD, GE, GH, GM, GR, GU, HK, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MG, MK, MN, MW, MX, MY, NZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2002159994 A1 20021031 US 2001-881213 20010615
AU 2001074761 A5 20011224 AU 2001-74761 20010618
PRAI SE 2000-2287 A 20000616
US 2000-216625P P 20000707
WO 2001-SE1374 W 20010618

L18 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35037 CAPLUS

DN 132:90367

TI Trifunctional reagent for conjugation to a biomolecule for use in
diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.

PA Dept. of Radiation Oncology, University of Washington, USA; Mitra Medical
Technology AB

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GB, GR, GU, HK, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GB, GR, GU, HK, IL, IN, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	US 2001023288	A1	20010920	US 2000-750280	20001229
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS

AN 2000:35036 CAPLUS

DN 132:90366

TI Trifunctional reagent for conjugation to a biomolecule for use in
diagnosis and therapy

IN Wilbur, D. Scott; Sandberg, Bengt E. B.
 PA Department of Radiation Oncology, University of Washington, USA; Mitra
 Medical Technology AB
 SO PCT Int. Appl., 41 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002050	A1	20000113	WO 1998-SE1345	19980707
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9883663	A1	20000124	AU 1998-83663	19980707
	CA 2336739	AA	20000113	CA 1999-2336739	19990707
	WO 2000002051	A1	20000113	WO 1999-SE1241	19990707
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9950767	A1	20000124	AU 1999-50767	19990707
	EP 1095274	A1	20010502	EP 1999-935251	19990707
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002519440	T2	20020702	JP 2000-558395	19990707
	NO 2001000021	A	20010307	NO 2001-21	20010103
PRAI	WO 1998-SE1345	A	19980707		
	WO 1999-SE1241	W	19990707		

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003

E AMINOISOPHTHALIC

L1 66 S E1-E6

L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1

E BIOTIN

L4 22854 S E3

L5 15 S L3 AND L4

E LINKER

L6 12580 S E3

L7 17 S L3 AND L6

L8 10 S L5 AND L7

L9 7 S L7 NOT L5
 L10 71 S TRIDECANEDIAMINE
 L11 6520 S AVIDIN
 L12 3 S L10 AND L11
 L13 15 S L10 AND L4
 L14 12 S L13 NOT L5
 L15 14 S L13 NOT L7
 L16 2 S L15 NOT L14
 E EXTRACORPOREAL
 L17 5404 S E3-E11
 L18 4 S L17 AND L3

=> s l17 and l10

L19 2 L17 AND L10

=> s l19 not l18

L20 0 L19 NOT L18

=> s l10 and l6

L21 13 L10 AND L6

=> dl21 1-13

DL21 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.
 For a list of commands available to you in the current file, enter
 "HELP COMMANDS" at an arrow prompt (=>).

=> d l21 1-13

L21 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:778699 CAPLUS
 DN 137:299916
 TI Peptide-containing compounds for targeting cells expressing NP-1 receptor
 IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
 Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
 Karen; Nanjappan, Palaniappa; Raju, Natarajan
 PA USA
 SO U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002147136	A1	20021010	US 2001-871974	20010604
PRAI	US 2000-585364	A2	20000602		
OS	MARPAT 137:299916				

L21 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 2002:534031 CAPLUS
 DN 137:93597
 TI Preparation and use of phenoxyalkylamino-linked dimers as sodium channel
 modulators
 IN Marquess, Daniel; Choi, Seok-ki; Beattie, David T.; Griffin, John H.;
 Armstrong, Scott; Church, Timothy J.; Jenkins, Thomas E.
 PA Advanced Medicine, Inc., USA
 SO U.S., 121 pp., Cont.-in-part of U. S. Ser. No. 325,563, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 25

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	US 6420354	B1	20020716	US 1999-458107	19991208
	CA 2318806	AA	19991216	CA 1999-2318806	19990607
	CA 2319142	AA	19991216	CA 1999-2319142	19990607
	CA 2319153	AA	19991216	CA 1999-2319153	19990607
	WO 9963984	A1	19991216	WO 1999-US11801	19990607
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
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	WO 9963932	A2	19991216	WO 1999-US12724	19990607
	WO 9963932	A3	20000203		
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	RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	WO 9964045	A1	19991216	WO 1999-US12754	19990607
	W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
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	AU 9945511	A1	19991230	AU 1999-45511	19990607
	AU 9946726	A	19991230	AU 1999-46726	19990607
	EP 1085879	A2	20010328	EP 1999-928442	19990607
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	EP 1085890	A1	20010328	EP 1999-930122	19990607
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	EP 1089749	A1	20010411	EP 1999-928447	19990607
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	JP 2002517437	T2	20020618	JP 2000-553053	19990607
	US 6479498	B1	20021112	US 2001-39699	20011109
PRAI	US 1998-88465P	P	19980608		
	US 1998-93068P	P	19980716		
	US 1999-325563	B2	19990604		
	WO 1999-US11801	W	19990607		
	WO 1999-US12724	W	19990607		
	WO 1999-US12754	W	19990607		
	US 1999-458107	A1	19991208		

OS MARPAT 137:93597

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

DN 136:25104
TI Peptide-containing compounds for targeting endothelial cells, compositions
containing the same and methods for their use
IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA Bracco Research USA, USA
SO PCT Int. Appl., 146 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001091805	A2	20011206	WO 2001-US18053	20010604
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,				
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,				
	RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,				
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	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2000-585364	A2	20000602		
OS	MARPAT 136:25104				

L21 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:640098 CAPLUS
TI Drug delivery and selective targeting by vitamin B12 derivatives
AU Reinhard, Kathryn S.; Gao, Xiang; Chaung, Danny K.; Wilson, Stephen R.
CS Department of Chemistry, New York University, New York, NY, 10003, USA
SO Abstracts of Papers, 222nd ACS National Meeting, Chicago, IL, United
States, August 26-30, 2001 (2001), MEDI-279 Publisher: American Chemical
Society, Washington, D. C.
CODEN: 69BUZP
DT Conference; Meeting Abstract
LA English

L21 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:284303 CAPLUS
DN 135:42876
TI Peptide and small molecule microarray for high throughput cell adhesion
and functional assays
AU Falsey, James R.; Renil, M.; Park, Steven; Li, Shijun; Lam, Kit S.
CS UC Davis Cancer Center Division of Hematology/Oncology and Department of
Internal Medicine, University of California Davis, Sacramento, CA, 95817,
USA
SO Bioconjugate Chemistry (2001), 12(3), 346-353
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2001:201927 CAPLUS
TI Synthesis and evaluation of protein biotinylation reagents that also
contain UV and/or fluorescence absorbing moieties
AU Wilbur, D. Scott; Chyan, Ming-Kuan; Hamlin, Donald K.; Sandberg, Bengt E.
B.

CS Radiation Oncology, University of Washington, Seattle, WA, 98103, USA
SO Abstr. Pap. - Am. Chem. Soc. (2001), 221st, MEDI-031
CODEN: ACSRAL; ISSN: 0065-7727
PB American Chemical Society
DT Journal; Meeting Abstract
LA English

L21 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2000:145059 CAPLUS
DN 132:191408
TI Rapid quantitative analysis of proteins or protein function in complex mixtures using affinity labeling reagents and mass spectrometry
IN Aebersold, Rudolf Hans; Gelb, Michael H.; Gygi, Steven P.; Scott, C. Ronald; Turecek, Frantisek; Gerber, Scott A.; Rist, Beate
PA University of Washington, USA
SO PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000011208	A1	20000302	WO 1999-US19415	19990825
	W: AU, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9956913	A1	20000314	AU 1999-56913	19990825
	EP 1105517	A1	20010613	EP 1999-943915	19990825
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002523058	T2	20020730	JP 2000-566460	19990825
	JP 3345401	B2	20021118		
	US 2002076739	A1	20020620	US 2001-839884	20010420
PRAI	US 1998-97788P	P	19980825		
	US 1998-99113P	P	19980903		
	US 1999-383062	A3	19990825		
	WO 1999-US19415	W	19990825		

OS MARPAT 132:191408
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 2000:142691 CAPLUS
DN 132:302964
TI High-Affinity Pentavalent Ligands of Escherichia coli Heat-Labile Enterotoxin by Modular Structure-Based Design
AU Fan, Erkang; Zhang, Zhongsheng; Minke, Wendy E.; Hou, Zheng; Verlinde, Christophe L. M. J.; Hol, Wim G. J.
CS Department of Biological Structure Biomolecular Structure Center and Howard Hughes Medical Institute, University of Washington, Seattle, WA, 98195, USA
SO Journal of the American Chemical Society (2000), 122(11), 2663-2664
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1999:369591 CAPLUS
DN 131:116513

TI Efficient assembly of peptomers on continuous surfaces
 AU Ast, Thomas; Heine, Niklas; Germeroth, Lothar; Schneider-Mergener, Jens;
 Wenschuh, Holger
 CS Institut fur Medizinische Immunologie, Universitätsklinikum Charite,
 Humboldt-Universität zu Berlin, Berlin, 10098, Germany
 SO Tetrahedron Letters (1999), 40(23), 4317-4318
 CODEN: TELEAY; ISSN: 0040-4039
 PB Elsevier Science Ltd.
 DT Journal
 LA English
 RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:708440 CAPLUS
 DN 127:298612
 TI Biotin Reagents for Antibody Pretargeting. 2. Synthesis and in Vitro
 Evaluation of Biotin Dimers and Trimers for Crosslinking of Streptavidin
 AU Wilbur, D. Scott; Pathare, Pradip M.; Hamlin, Donald K.; Weerawarna, S.
 Ananda
 CS Department of Radiation Oncology, University of Washington, Seattle, WA,
 98195, USA
 SO Bioconjugate Chemistry (1997), 8(6), 819-832
 CODEN: BCCHEs; ISSN: 1043-1802
 PB American Chemical Society
 DT Journal
 LA English

L21 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:542454 CAPLUS
 DN 127:220519
 TI Preparation of biotin containing compounds with water soluble
linker moieties for use as radionuclides and streptavidin
 crosslinking agents
 IN Wilbur, Scott D.; Pathare, Pradip M.; Weerawarna, S. Ananda; Hamlin,
 Donald K.
 PA Board of Regents of the University of Washington, USA
 SO PCT Int. Appl., 80 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9729114	A1	19970814	WO 1997-US2560	19970207
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,				
	DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,				
	LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,				
	RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU,				
	AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,				
	IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,				
	MR, NE, SN, TD, TG				
	AU 9720524	A1	19970828	AU 1997-20524	19970207
PRAI	US 1996-11321P	P	19960208		
	WO 1997-US2560	W	19970207		

L21 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2003 ACS
 AN 1997:433652 CAPLUS
 DN 127:121587
 TI Biotin reagents for antibody pretargeting. Synthesis, radioiodination and
 in vitro evaluation of water soluble, biotinidase resistant biotin

derivatives

AU Wilbur, D. Scott; Hamlin, Donald K.; Pathare, Pradip M.; Weerawarna, S. Ananda
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(4), 572-584
CODEN: BCCHE; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

L21 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1997:155067 CAPLUS
DN 126:207193
TI Synthesis of Cobalamin Dimers Using Isophthalate Crosslinking of Corrin Ring Carboxylates and Evaluation of Their Binding to Transcobalamin. 2
AU Pathare, Pradip M.; Wilbur, D. Scott; Hamlin, Donald K.; Heusser, Shannon; Quadros, Edward V.; McLoughlin, Patricia; Morgan, A. Charles
CS Department of Radiation Oncology, University of Washington, Seattle, WA, 98195, USA
SO Bioconjugate Chemistry (1997), 8(2), 161-172
CODEN: BCCHE; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English

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(FILE 'HOME' ENTERED AT 12:48:52 ON 16 JAN 2003)

FILE 'REGISTRY' ENTERED AT 12:48:58 ON 16 JAN 2003
E AMINOISOPHTHALIC

L1 66 S E1-E6
L2 0 S FILE CAPLUS

FILE 'CAPLUS' ENTERED AT 12:51:32 ON 16 JAN 2003

L3 597 S L1 ~~Trivalent~~
E BIOTIN
L4 22854 S E3
L5 15 S L3 AND L4 ←
E LINKER
L6 12580 S E3
L7 17 S L3 AND L6 ← Trivalent + Linker
L8 10 S L5 AND L7 -
L9 7 S L7 NOT L5 -
L10 71 S TRIDECANEDIAMINE → then Link + 1
L11 6520 S AVIDIN
L12 3 S L10 AND L11 -
L13 15 S L10 AND L4 → then Link + Trivalent
L14 12 S L13 NOT L5 -
L15 14 S L13 NOT L7 -
L16 2 S L15 NOT L14
E EXTRACORPOREAL >
L17 5404 S E3-E11
L18 4 S L17 AND L3
L19 2 S L17 AND L10
L20 0 S L19 NOT L18
L21 13 S L10 AND L6

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---Logging off of STN---

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Executing the logoff script...

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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
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FULL ESTIMATED COST	205.04	239.75
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-16.93	-16.93

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